NASA SCIENTIFIC AND TECHNICAL INFORMATION CONFERENCE

SUMMARY

CHAMBERLIN HOTEL

HAMPTON, VIRGINIA

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OPENING AND INTRODUCTIONS:

Van Wente opened the conference by welcoming all attendees. He introduced Jess Ross who presented some administrative matters related to the conference. A list of attendees at this meeting is presented as Attachment 1.

Mr. Ross introduced Robert H. Tolson, Chief Scientist at the Langley Research Center, who gave the Keynote Address. Mr. Tolson reviewed the history of the Langley Research Center and indicated that the Center's three principal objectives are to perform high-quality research, to transfer the results of this work to the intended users, and to support other government agencies and the public by providing test facilities. He also discussed foreign technology transfer and the FEDD program.

SESSION 1: Chairman: Van A. Wente

Mr. Wente introduced Col. L. W. Vogel as his new Division Director following the June reogranization. Col. Vogel greeted the attendees explaining his new role as Director of the Logistics Management and Information Programs Division and how the Office of Management in Headquarters relates to the other Headquarters Program Offices with their management of the Agency's R&D funds and direct involvement with NASA Centers. He indicated that top Agency management was becoming more interested in standardization of systems whenever it could be shown that productivity or effectiveness could be improved.

Mr. Wente then asked for news and comments from the principal representatives of each organization sending members to the Conference. The exchange was most useful in bringing all up to date on personnel changes and related matters.

SESSION 2: Chairman: Rexford H. Talbert

Video Disc Applications — Dennis Bushnell

Mr. Bushnell gave a presentation on increasing reseacher effectiveness by utilizing mass-storage devices, specifically a video disc, for local technical information storage and retrieval. He examined supporting a full text local file relating directly to the researcher's interest profile. The specific system Mr. Bushnell discussed as a possible applicant was a prototype laser-disc system developed at IITRI. (Attachment 2)

Telecommunications — Rexford H. Talbert

Mr. Talbert gave a presentation on RECON Telecommunications. He presented charts and discussed RECON user population; unidirectional transient errors on RECON prior to and after the digital line conversions, response delay timeliness for dial-up and dedicated terminals using analog, digital and satellite services and present RECON line configurations.

In addition, electronic mail as applied to RECON and terminal replacement plans were also discussed. (Attachment 3)

NASA RECON Enhancements and Hardware — Don Jewell

Mr. Jewell of the NASA STI Facility gave a presentation of past year completed projects, current on-going projects, and future enhancements to the NASA RECON software and hardware. The presentation was divided into projects with results that were apparent to the end user, and projects that were transparent to the end user, but nevertheless resource consuming.

In particular, completed projects apparent to the users included such things as 1200 baud dial-up capability, full page display for dial-up terminals, new UTS-400 features, new help information and searchable mnemonics, indexes for special bibliographies, improved reliability and response time, and numerous cosmetic and corrective modifications to RECON commands. Completed projects transparent to the users were a seven man-year conversion to a new host operating system, and new communications processor/operating system, conversion to new disk technology, and a conversion from analog to digital communication lines.

Mr. Jewell identified three major RECON projects already completed or scheduled for the current fiscal year that would be apparent to the user community. The three projects were: UTS-400 enhancements; on-line document ordering enhancements; and an upgrade of the RECON host processor. Four additional projects transparent to the users were identified for the current fiscal year: improved RECON statistics; conversion to a new PBX; expansion of the user community; and a new input processing system.

Mr. Jewell concluded his presentation with a list of eight potential projects for upcoming years, stating that additional projects may be added to the list as the need arose. (Attachment 4)

SESSION 3: Chairman: John H. Wilson, Jr.

Demonstration of the DOE/LLL/Technology Information System

John H. Wilson, Jr.

Under the direction of Viktor Hampel, the Lawrence Livermore Laboratory is being funded by TIC, Oak Ridge, of the Department of Energy to develop a system that will simplify access to multiple data bases, both bibliographic and numeric, and permit postprocessing of the searches of these data bases. NASA is participating in testing the system. Center STI managers and librarians are encouraged to request a demonstration on their site for themselves or for the R&D staffs.

The Technology Information System has been under development since 1976. The major supporting agency has been the DOE Office of Energy System Research (ESR). In FY 1980, development of TIS as the base for the prototype of an intelligent gateway computer was initiated by the DOE Technical Information Center.

Dedicated to information management, TIS leads the user to available information resources on the system or elsewhere by means of a master directory and automated access procedures. Other information centers accessible through TIS include federal and commercial systems like CIS, DOE-Alternative Fuels, DOE/RECON, DOT/TIC, MIT-MACSYMA, NASA/RECON, SERI, DIALOG, etc. Additional centers are added as required. Unlike other information systems, TIS provides authorized users not only with direct access to a growing number of national information resources, but permits also the extraction of descriptive and numeric information into topical datafiles on TIS for subsequent post-processing, analysis, and graphical display. Primary capabilities are text and data-base management, interactive modeling, electronic mail, and net-working.

The primary concept embodied in the TIS is a novel approach to information management, made possible through state-of-the-art software and the unique META-MACHINE user interface developed at LLNL. Instructions to the user for the execution of programs on the local machine or geographically distributed computers, are not deposited in a conventional source program, but in a relational database. The capabilities and response of the integrated system can therefore be changed and extended in real time, online, without recompiling of software. This implementation makes it also possible to adapt the system for use with languages other than English.

This approach to information management makes TIS exceptionally well suited for the transfer of advanced tehcnologies among agencies and to the public domain. There is no duplication of effort. The TIS master directory is being updated from the

individual directories of the geographically distributed topical information centers. Incompatible formats of data can be translated into common formats where needed during transfer for aggregation and unified evaluation.

TIS is accessible by telephone dial-up over FTS and commercial telephone lines, WATS, the ARPA computer network, and TYMNET. Interactions with the user are menu-driven and self-guided, permitting also those not familiar with computers the ability to find and use the desired information with relative ease. Electronic mail and interconnection of TIS to electronic word processors and typesetters establish a fully integrated information system for DOE managers, representatives from other federal agencies, and engineers and scientists of prime contractors to the government. (Attachment 5)

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Mr. Wente called the meeting to order, and announced that time for SESSION 5 (10:40--12:00) would be switched with SESSION 6 (1:30--2:45) at the suggestion of Mrs. Jane Hess so that the paper on the integrated library system would immediately precede the CLSI briefing in SESSION 7. He then turned the meeting over to Mr. Alfred C. String, Jr., Chairman of SESSIONS 4 and 5.

SESSION 4: Chairman: Alfred C. String, Jr.

Federal Library Committee Talk and Questions
James P. Riley

Mr. String introduced the guest speaker, Mr. James P. Riley, Executive Director of the Federal Library Committee since 1974. Mr. String sketched Mr. Riley's career in academic and government libraries and his association with MEDLARS.

Mr. Riley began his talk with accounts of the history of FLC and FEDLINK from the time in 1974 when 10 Federal libraries joined together through FLC to experiment with dial-up OCLC access, an effort costing $66,000. He contrasted this with the situation today when FEDLINK manages 20 contracts and 760 interagency agreements, with over 400 Federal libraries, worth some $11 million.

Mr. Riley described the contracts currently offered to Federal libraries through FEDLINK involving access to various data-bases including tape processing for printed catalogs and other such tools. The tape processing contracts have had to be recompeted, and Mr. Riley expects multiple awards next time, perhaps five. He also explained what the Library of Congress

does in the way of tape processing; it is confined to the production of MARC records for which lists of LC card numbers have been submitted in machine-readable form. The cost is 7¢ a record.

There are also new experimental contracts dealing with demographic, industrial, utility, and energy data. He noted that any library receiving 80% or more of its funding from the Government is eligible to utilize FEDLINK services.

Mr. Riley was asked if the full capability of RLIN would ever be made available to Federal libraries throughout the country. He recalled that the FLC had negotiated with the Research Libraries Group for nearly two years before they admitted that any formal involvement with Federal libraries beyond search capability was fifth or sixth on their list of priorities. Asked if Federal science and technology libraries would appeal to RLIN, Mr. Riley replied that there were not really so many of those in the first place, and that such collections would be of little interest. Another question concerned the availability of RLIN tapes; Mr. Riley pointed out that on this score RLIN was not so indifferent, and cited the fact that RLIN tapes were being put into OCLC. He went on to say that if NASA, as an agency, were interested in obtaining RLIN services, citing its science and technology emphasis and the fact that one NASA library was laready a member, RLIN might not be overwhelmed as they are when he speaks to them as a representative of about 450 libraries. Further, FLC would be willing to make the initial contact; Mr. Wente indicated that the matter would be pursued.

The next question asked the status of the new OPM standards for librarians. Mr. Riley began his reply by noting that, although there were a number of non-Federal librarians in the room, the new standards had an impact throughout the profession, so were a matter of interest to all librarians. He also noted that, rumors to the contrary, they were still under revision and would not to in for first level (division) approval until the end of the month. Approval at the first level is expected, and the next level would be Secretary Devine. According to Mr. Riley, this involvement at the secretarial level was new, and not considered beneficial. At any rate, there was still time for comment, directly or through the congressional route. There have been a number of such inquiries, which have had the effect of slowing the process down, since they take priority.

Mr. Riley described the new standards as putting greater recognition on experience and academic achievement. Also, the new standards consider the MA qualifying for GS-9 entry to be a full two-year degree, unlike the present qualification standards which declare the less-than-two-

year MA to be equivalent to 2 years of graduate study, either of which qualifies the candidate to enter at the GS-9 level. Mr. Riley defined this as the long standing "common pattern" concept which, while retained in some series undergoing similar revision, for example--accounting, has been dropped for librarians. Many, including FLC, consider this discriminatory, and some even think especially so because women predominate numerically in the profession. OPM denies any such interest, citing two other series that have been similarly changed, but FLC maintains that so long as the "common pattern" idea is a written policy (in Handbook X-118) then it is discriminatory.

New in the standards is the GS-5 entry level for applicants having a BA in library studies. Mr. Riley reported that he had just learned at OPM the previous day that Mr. Devine was now proposing that graduates with superior academic achievement but no library training could be hired for work in libraries. Some librarians actually favor the policy, in order to pick-up graduates with scientific and engineering backgrounds. This would seem to put FLC in the middle, but Mr. Riley was emphatic that they were on record asserting that the policy was discriminatory against the one-year graduate librarian who would qualify for GS-7 placement.

In response to a number of questions from the floor, Mr. Riley made these observations: under the new standards, library managers will have discretion as to positions being written up and classed as library positions or subject specialty, and hire accordingly.

OPM predicts that both the library profession and the Government will ultimately benefit from the insistence on a two-year degree for the GS-9 level, although there is little enthusiasm for this idea among most of the library and information science graduate schools on the grounds of added cost to the student. A transition to a two-year degree could be easy for the likes of the University of Pittsburg, whose 1980 catalog lists 86 courses available, but not for many. Some schools, like UCLA and Illinois, are showing a slight trend toward expanding courses, and others are experimenting with a 1 1/2 year program. But most are reluctant to go all the way to a two-year program.

OPM recognizes the need for some counter-balancing of the new emphasis on qualifying experience, and will probably find some way to include in the standards the notion that entry into a series in one thing, but traditional academic training can still be very important for advancement.

As for the impact on present position descriptions, most agencies will not have too many downgrading situations, it is another matter with the national libraries. The Library of Congress expects problems with some 40 positions, located mostly in preliminary cataloging and interlibrary loan. There has been nothing in writing to suggest a deliberate effort to relate series revisions with lowering the average grade in the Federal Government.

Even though the treatment of the one-year MA degree has been a disappointment, the revised standards have reunited the profession from its split in the tentative standards. OPM believes that the flexibility of the new standards will be of great value to the Government and its library managers in the years to come.

SESSION 5: Chairman: Frank H. Rowsome

Tech Briefs on RECON — John H. Wilson, Jr.

The Tech Briefs on RECON are being processed by TU at the NASA STI Facility. The next batch will be processed November 1. Abstracts for SCAN are to be added during FY 1983 with scope and processing being reviewed.

SCAN Abstracts and Scope — John H. Wilson, Jr.

Abstracts will be added to SCAN entries during 1983, and the indexing terms dropped. Scope of some SCAN categories have been refined to prevent collecting too many entries: several had been averaging well over 100 entries per issue, far too many.

NACA File — John H. Wilson, Jr.

The STI Facility has proposed a test inputting of 7,000 to 8,000 cards from the Langley NACA file, to determine whether $3/card is a reasonable projection for inputting the file of approximately 150,000 items. STIB is considering the proposal.

Numerical Data Bases — John H. Wilson, Jr.

A plea was issued for input in response to the July/August follow-on letter regarding numerical data bases. Approximately 40 usable descriptions have been received. This is only the tip of the iceberg.

Tape Availability — John H. Wilson, Jr.

Leasing of STAR and IAA tapes is being reviewed in light of recent concern over technology drain from the U.S. to foreign countries. While it is agreed U.S. industry should have access

to the information in the tapes, ability to prevent flow to foreign industry is questioned. STIB hopes for an early resolution of this issue, believing the tapes should be made available domestically.

FEDD Change — John H. Wilson, Jr.

Code R, NASA Headquarters, is preparing an NMI placing responsibility on the centers regarding the FEDD change and a question was asked whether library access would be included. STIB may have to issue supplemental instructions or suggested procedures for libraries regarding this issue.

Direct Input and Word Processing Interface — John H. Wilson, Jr.

During FY 1983 STIB will be moving toward the standard abstract page coming to STIF in usable format in electronic form for direct input from word processing at centers. Procedures will be worked out with centers. This may be regarded as the first step in electronic input from the centers into STIF.

Lexical Dictionary — John H. Wilson, Jr.

During 1983 STIF will be testing and moving into full use of the DTIC tape. DTIC indexing will be "subject switched" using a "lexical dictionary", a specially formatted version of the NASA Thesaurus. Development of computer-aided-indexing and computer-aided-cataloging for DOE, Oak Ridge, tapes is also planned.

Charge for Searches — John H. Wilson, Jr.

January 1983 an $80 charge will be made for STI Facility searches. Centers and universities will be exempt. Those who need searches but object to paying the $80 charge, will be encouraged to apply for access to RECON.

Publications Manual — Frank H. Rowsome

Mr. Rowsome commented briefly on the new NASA Publications Guide, the first major overhaul of the publications manual since Ida Young's raspberry book; this produced by Kay Voglewede with aid and counsel from many field editors. He noted new simplicity and clarity on such ancient brambles as abstracts vs. summaries, and on arcane aspects of referenceability. But he pointed out that no publication is likely to answer every conceivable question, and that it cannot substitute for common sense in serving an editor's primary obligation to the reader.

Metrication — Frank H. Rowsome

Mr. Rowsome also reported that a new management issuance on the subject of metrication gave permission for editors on aeronautical reports in particular to use common sense in dealing with questions of customary vs. S.I. units.

Report Format — Frank H. Rowsome

As to Mr. Tom Pinelli's study of report format preferences, Mr. Rowsome reported on responses received from individual centers to the dozen specific recommendations made. In general, NASA centers expressed no excruciating pain resulting from eight or nine of the dozen changes the report called for, although there was a wide spectrum of views on some matters. Mr. Rowsome said that Headquarters would get out a memorandum on those changes that seemed desirable for NASA to adopt.

SESSION 6: — Chairman: Alfred C. String, Jr.

Serials Subscription Survey — Col. L. W. Vogel

Following lunch, Mr. String opened Session 6 by introducing Col. Vogel as a substitute to discuss the recent Serials Subscription Survey. Col. Vogel traced the origin of the Survey to a recent survey of subscriptions going to Headquarters offices, including that of the Administrator, which was among the most cooperative in reducing its demands. The Administrator raised the question of how much money was spent on subscriptions Agency-wide and could savings be effected. The idea was passed down through channels to STIB, where a message to the field centers was sent to obtain the first part of the question was prepared, signed by Mr. Louis N. Lushina. The result came to $1.6 million (i.e., $1.8 million). Nothing happened for a few months, then the Acting Executive Officer, Mr. Frank Coy, raised the question with Col. Vogel and Mr. Peter Hatt as to what was going to be done about the matter since Mr. Beggs was still interested in seeing what money could be saved in subscriptions. At about this time Col. Vogel became responsible for Agency-wide library activities, so he was given the action to find out how and by what means money could be saved in the NASA libraries by reducing unnecessary formal publications. Mr. Beggs was also concerned from the side of productivity, since a man reading a journal he didn't have to was wasting time. A letter was drafted in STIB for Mr. Beggs' signature, but this was returned to Col. Vogel to be re-drafted for Dr. Olstad's signature, and addressed, not to the Centers, but to the three Associate Administrators who had Centers

reporting to them. It was sent and they were asked to determine how much money was being saved at their respective Centers, so that a consolidated reply could be sent to the Administrator. Replies were supposed to be received in 60 days. About 15 days before the October 24 deadline; Col. Vogel sent personal notes to officials in the program offices reminding them of the October 24 dealine, suggesting that Frank Coy would be following up on the requirements. About five days later, Mr. Coy did in fact call Col. Vogel who prompted the office once again. He asked those present who had replied, and noted raised hands for Goddard, Langley, Lewis, and Ames.

Mr. Mandel asked if participants could receive a copy of the report to the Administrator. Col. Vogel replied in the affirmative, promising also any backup material on the individual installations. Adele Wilder, JPL, commented that she would be interested in this feedback, even though JPL had been omitted from this requirement, because she was involved at that moment in discussing subscription costs with her management.

Another question concerned savings of office subscriptions as opposed to library (expected to be greater in the former case) and raised the question of central Center responsibility for the purchase of journals. Col. Vogel suggested that the Goddard Library and others, might seek that authority and role to reduce overall subscription costs.

Cooperative Collection Development Alfred C. String, Jr.

Mr. String then took up the topic, "Cooperative Collection Development." He related this to the "Centers of Excellence" concept, which originated at the Airlie House STI Conference in 1975, and was understood to be concerned only with journals. A committee was formed, which, sometime between 1975 and 1980 drew up lists of journals subscribed to by the individual Centers recommending which journals each Center retain, and sent them out in 1980. The four replies returned so far show a major problem in that many of the recommended journals had been dropped. The entire project is now in abeyance.

Mr. String then turned to a slide to show how the older idea of centers of excellence was, at least in the case of Headquarters, based on the amount of space available for a journal collection. The concept of cooperative development introduces the idea of acquisitions based on budget. (Attachment 6)

While journals could be thought of in terms of titles, the greater number of books can only be dealt with in terms of subject-matter areas, for example, STAR categories, LC class headings, or any number of schemes. It might be better for a Center library interested in the cooperative idea to define its own interests in its own terms to the others, so as to create a collection profile. These could be assembled and put into some common frame of reference.

Returning to the question of journals, Mr. String offered to send each interested Center an extra copy of its latest local journal holdings list for annotating titles it intends to buy and keep indefinitely and any other lesser priorities, according to a notation that could be settled on later.

Whatever course is taken toward Center specialization should take into account the role of AIAA and the Facility which course depends to a large extent on the Facility's future location.

Ms. Del Frate asked at this point that the Centers be asked to indicate only titles that would be bought and kept "forever more" because anything else is too much, as was the case with the list of journals sent out before.

Mr. Mandel expressed the view that the whole idea was invalid for Lewis, because of changing programs. He cited previous Lewis interests in nuclear propulsion and energy, which have been dropped, as examples.

Ms. Hess noted that Langley weeded their journals every year, and for those to be retained, bought film cassettes.

Mr. Wente called attention to the use of AIAA/TIS by NASA libraries, which was confirmed by Patricia Marshall. Mr. String closed the topic by saying that his intention had been to revive the idea of center specialization, and more work would be devoted to the concept at Headquarters based on Center inputs and desires. Also that there should be a basic core journal collection of perhaps 200 titles in complete runs located somewhere in NASA and available to all.

Verification Project — Eric Vogel

This topic was presented by Mr. Eric Vogel, Deputy Manager of the Library Services Division, NASA Scientific and Technical Information Facility.

Mr. Vogel began his talk by repeating the types of book data base errors as categorized in the King Study, namely, duplicate records, errors in record content and format, (information in wrong field, sometimes from the MARC-STIMS conversion), uneven quality in non-MARC records supplied by the centers, and missing records.

The verification effort has concentrated on eight key fields from the bibliographic records which can only be checked against center shelf lists for complete verification. Work so far has been done with the Headquarters and Langley shelf-lists, in the case of Headquarters by photocopying actual shelf list cards from drawers sent out periodically; in the case of Langley, photocopies of cards are sent after they have been checked for missing books. Over 70,000 cards have been sent representing the entire book collection. Mrs. Hess at this point recognized Carolyn Floyd of the Langley Library for her direction of student assistants in this project.

Headquarters Library holdings in the data base have doubled since the shelf list project began a year ago. Mr. Vogel singled out JPL as the library making the greatest use of the on-line update capability in adding holdings to the file.

Mr. Vogel went on to explain how the new Verification Lists, which list books in true call number order, were used to identify duplicate records and other erroneous information that only communication with the Center library can settle. Another step involving authors has been completed, whereby all personal authors have been checked to insure that extra spaces between initials or other erroneous data have not led to incorrect sorts on RECON displays.

Another method for identifying suspicious duplicates has been through the use of the familiar OCLC search key of entering the first 3, 2, 2, 1 letters of the first four words, respectively, of each title.

Col. Vogel asked if any thought had been given to the cost trade-off of these efforts; Mr. Vogel said no, but Mr. Miles interjected the idea that the payoff to this was best noticed at the Centers. Mr. String added that the verification work was confirmed to past inputs, with the more recent data considered to be correct.

Mr. Vogel described the value of OCLC as an authority in the verification process. He stressed the importance also of the cooperative nature of the effort. In aid of this,

the Library Services Division was reorganized along the lines of "teams" responsible for all the work done for assigned centers. In this way, a NASA library can always be certain of a response to inquiries by contacting staff familiar with the entire range of the processing cycle. Contacts between team leaders and their respective libraries is considered more responsive than the previous organization along purely functional lines.

Mr. Vogel explained the fact that one team was devoted solely to Langley by the amount of work for that Center specified in the Statement-of-Work, and the large number of Langley holdings to be checked and added.

In conclusion, Mr. Vogel called attention to the availability of Verification Lists to any NASA library wanting a list of what it had on the file, and also to the availability of on-line NALNET input capability during all hours that RECON was available. He also promised a greater amount of feedback to the libraries, for example, through the return of catalog cards submitted for input with the accession number added.

Sara Duecker (Ames) asked if, instead of a project like Langley's shelf list, an RLIN tape could be input to capture all of Ames' holdings. Mr. Vogel replied that any machine-readable means of input was worth investigating. Mr. String noted that the rationale behind the Langley shelf list effort was that the more records in the data base, the easier adding holdings became.

Integrated Library System Briefing — Earl Watterson

The last presentation in Session 6 was the "Integrated Library System Briefing" given by Mr. Earl D. Watterson, Manager of the Library Services Division at the STI Facility.

Mr. Watterson began by noting the evident interest in the ILS concept expressed by attendees at the 1981 STI meeting, when STIB made a commitment to study the matter through the Facility. He noted two studies related to ILS, one on off-the-shelf software available on the market, completed in April, and an on-going effort to estimate the size of a system required to support the NASA library needs for an ILS.

Mr. Watterson reviewed the functions to be supported by an Agency-wide ILS, namely acquisition, circulation, on-line catalog, bibliographic files, management information. He described a modular system for NALNET that could be adopted all or in part by each participating library. The processing would be carried out locally using micro-processors

and partly with a large mini-computer based at the Facility acting as a front-end processor for the RECON data base. For example, the circulation module, patron files and bibliographic data would reside locally, while this information would be manipulated at the Facility in coded form, possible call numbers and social security numbers, and transmitted back to the library involved. Data for each library on-line catalog could be input from either place, and the data transferred into RECON overnight.

Among the critical decisions to be made in any NASA ILS is the choice of format, that is, STIMS, MARC, or some other. The choice of MARC would have the advantage of direct access to OCLC and RLIN to secure records for on-line catalogs.

Mr. Watterson mentioned Boolean Logic capability while reiterating ILS capabilities, and he was questioned about it. He replied that full text search capability, but in any case the choice of hardware would have much to do with the ILS capabilities.

This lead Mr. Watterson into the subject of the current investigation at the Facility regarding the possibility of acquiring a mini-computer to support data entry and cataloging. Mr. Watterson noted that a leading contender for this role, the British-made Perkin-Elmer, could be used also as the central ILS processor, with the proper add-ons and software totalling about $175,000 in cost.

He was questioned if that sum included the Center hardware costs. Mr. Watterson answered in the negative, then went on to estimate micro-processor costs of $5-15K, depending on the range of applications a Center selected. Only a few candidate processors have been identified so far.

Mr. Watterson concluded his presentation by recommending that the upgraded Langley CLSI be used as a pilot to study communications with RECON; make a detailed analysis of hardware and software so as to be able to develop system specifications; and develop an implementation of the sort shown in his slide presentation. He observed that if a decision were made to let the new data entry mini-computer be host to an ILS, work on the ILS could be started next spring.

He was asked by Mr. Wente why he recommended this add-on approach; the reply was simply the least expensive way to go. Mr. Watterson pointed out that the ILS estimate of $175K spread out among 10 centers was only $17,500 apiece, a sum far less than any configuration stand-alone systems in the field. He repeated that his costs were predicated on one hardware choice.

The discussion following Mr. Watterson's presentation centered around the funding of the proposed ILS, its value compared to other STIB/Facility activities, and the validity of the Facility ILS Study itself.

Mr. Wilson asked if Mr. Watterson's cost figures included operating costs; Mr. Watterson replied that savings were to be expected at the Center operational level, and further expanded user services at no increase in costs could be anticipated. Paul Bennett (Ames) remarked that even $17,500 was a large sum these days in center budgets. Mrs. Hess volunteered that, had there been an Agency-wide ILS system, she could list the things Langley would not have had to buy in CLSI upgrade, which came to $120K.

Col. Vogel suggested that the entire ILS question could serve as an example of the new relationship with the program offices, in that they would be briefed on long-range cost savings from an ILS, if that were the case, and funding to their respective centers would reflect support of the ILS concept. Mr. Wente added that the program offices were interested in the small sums involved with access to DOE data, and could be expected to be even more interested in the relatively large sums associated with ILS.

In response to a comment from Mr. Wente, Mr. Watterson conceded that communications costs were not included in his figures. He speculated, however, that there was some feeling the RECON lines could be used for the ILS, and not new ones.

Ms. Del Frate called attention to the adoption of a number of Federal libraries of the Lister Hill (National Library of Medicine) Integrated Library System. She considers this an established system that should be considered before the Facility designed something else. Mr. Watterson replied later that nothing had been ruled out. Mrs. Hess noted that the NIH Library selected CLSI over the Lister Hill System.

To the question of the desirability and priority a NASA ILS might have, it was pointed out that NALNET was second only to RECON in last year's product valuation survey of the center libraries.

The discussion also brought out the fact that the NASA ILS study was indeed incomplete, but the presentation depicted only its status, and we were by no means at a decision point. More information was needed on systems development and, most important, inputs from the centers were needed to determine the extent of their interest in and nature of their requirements. The main thrust of the ILS concept remained the avoidance of expensive and incompatible systems throughout the Agency.

Continuing Education Seminars and Workshops
George Mandel

The following comments were made by Mr. George Mandel concerning Lewis Research Center's Continuing Education Seminars and Contracting Out - On-Site.

"At Lewis, during the last two years, we have made available to our division staff members a number of continuing education programs. These specialized education courses included several workshops and seminars featuring experts from industry, universities, and NASA Headquarters with specialties unique to our disciplines. Our goal is to update our many talented staff members with the new techniques, procedures, and equipment in their rapidly changing fields.

"Vu-graph 1: (Attachment 7)

"We have had programs on 'Graphic Problem Areas,' 'Word Processing and Phototypesetting Techniques,' 'Technical Publications,' and 'Computerized Data Terminals.'

"Vu-graph 2-3: (Attachment 8)

"Here is a tabular listing of the staff meetings identifying the speaker, his/her organization, the subject, number of division attendees and the presentation dates. As you can see, the subjects are directly relevant to our working needs. To ensure that the context is appropriate, we typically have developed the outline of the presentations with the speakers, and the presentations have been custom-tailored for our specific requirements.

"These programs supplement the individual training courses which our staff members are encouraged to attend, and provide an opportunity for them to address and discuss our specific problem areas with the speakers and with each other."

Contracting Out - On Site George Mandel

"In order to stay within the center complement and accomplish the jobs necessary to work the many center projects, a number of contractors have been hired to provide additional staff members to supplement the civil service staff.

"Vu-graph 1: (Attachment 9)

"At the various NASA centers, contractors are providing services in many STI activities, such as publications, editorial, manuscript processing, graphics, printing,

"photography, library services, etc. This Vu-graph shows the Lewis organizational units, some of which are candidates for on-site contracting.

"Vu-graph 2: (Attachment 10)

"By contacting Headquarters and the various centers, we prepared this chart that displays the current status of on-site contracting of library services, etc.

"It would be extremely helpful if Headquarters would also develop and provide tables similar to this Vu-graph for the other STI activities, such as printing, photography, graphics, etc.

"It has been helpful for us to exchange copies of RFP's and Statements of Work with the other centers. Van Wente has recommended that Headquarters would be the Clearing House for center and Headquarter's RFP's, and Statements of Work of STI activities.

"It would also be helpful to exchange center experience in terms of 'core' civil service staff. Do the centers consider certain skills as basic, e.g., their professional editors, librarians, and photographers, who should be retained as civil service staff?"

SESSION 7: Chairwoman: Jane Hess

CLSI Briefing — Jane Hess

"For several years now, Langley has seen the need to acquire and implement an automated integrated library system. Such a system, coupled with NASA RECON through either a direct or an indirect interface will multiply exponentially the efficiency, versatility, and value of the RECON system.

"We have completed one more level towards accomplishing our goal. Recently, we upgraded our CLSI LIBS 100 Circulation System which used an obsolete DEC PDP 11/04 CPU to one which now is based on a microprocessor--the PDP 11/23 which has 256,000 characters of memory. In addition to hardware and software changes, we also purchased two 300 megabyte disc drives which increased our storage 10 fold. (Attachment 11)

"This upgrade has opened the door to a variety of new functional capabilities without the expense of having to convert our existing machine records to accommodate a new system. Our complex looks something like this. (Attachment 12)"

"Rather than being limited to strictly circulation functions, we will very shortly have access to an acquisitions module, online access catalog called PAC, film (materials) booking, Boolean searching, a report generator and statistical package and authority control module. All functional areas in the system will be integrated with one unique bibliographic database. (Attachment 13)

"Explanation of each module:

"1. The online catalog or PAC provides current and complete circulation information to our staff and patrons.

"2. Cataloging online will be used for our in-house document cataloging.

"3. Film booking is an online system for reserving films. It also tracks individual items through the inspection process after receipt in the library. It automatically issues overdue notices just as the circulation module does.

"4. Book acquisitions software will permit online pre-order searching. Purchase orders will be printed on demand with all claiming dates established and obligation of funds shown. Upon receipt of a book, routing slips are printed and attached to each item as it is tracked through book processing. Summary reports showing vendor performance, appropriations, expenditures, debits, etc., may be produced on demand.

"5. The report generator (MIS) has not yet been released but is expected to be a very powerful program which will permit reporting on any and all combinations of information contained online.

"6. The serials control is in development and will not be available for some time.

"7. Online authority control includes personal author, corporate author, and subject headings. Also, cross referencing such as See and See Also, See Formerly, and See Further will be in the notes field of the authority file.

"8. The circulation control module automates the repetitive tasks of the library's circulation activities, automatically maintains patron and material information, processes loan transactions, and prints management reports and patron notices."

"Now our greatest need is an interface between CLSI and NASA RECON--either an overlay tape-to-machine (automatic) or a direct machine-to-machine (manual) interface will enable us to eliminate the majority of the laborious and time-consuming tasks of keying each record, and will provide us with quality bibliographic data. (Attachment 14)

"Current and Proposed Fields (Attachment 15)

"At present a citation in the database is composed of the first 9 fields as illustrated in this viewgraph. These are permanently set; that is, their order cannot be altered. Currently, three of these nine are searchable: 1) call number; 2) main entry; 3) title.

"The new system will allow us to expand the number of searchable fields and increase the amount of data to be included in each citation. This viewgraph shows a tentative plan for the expansion of our CLSI citation. Before finalizing this expansion we must consider compatibility with NASA RECON in order to establish data links between the two.

"Hopefully NASA Headquarters will support the development of an interface between CLSI and RECON which will enhance both systems."

There followed a Hands-On Demonstration after this SESSION.

OCTOBER 21, 1982

SESSION 8: Chairman: Van A. Wente

Standardization of Statistics — Frank H. Rowsome

Mr. String discussed data compiled from each center's annual reports on certain publications and library workloads. He said that better definitions of each separate category were needed so that center-to-center comparisons could have some meaning. Now the only comparisons possible are with a given center's previous reports. He agreed to propose, with Mr. Rowsome's help, some improved definitions for review by all parties. (Attachment 16)

After Mr. String had unfolded some of the problems encountered in trying to achieve internal comparability within the annual productivity report, Mr. Rowsome summarized some of the difficulties in using Facility accession figures for a proposed Quarterly Productivity Comparison. Careful, exact, clearly distinguished distinctions appear to be at the root of the problem. We haven't given up trying.

Contractor Reports Input — Charles W. Hargrave

Mr. Hargrave reported that contractor report input had increased for CY-82. He mentioned a new program of automatic registration and STAR distribution for new contractors that are not registered at the Facility. Proposed actions include (1) update of contract provisions for contractor reporting; and (2) training session for contract monitors for DRF processing.

New Security Classification Order — Charles W. Hargrave

Mr. Hargrave outlined the modifications included in EO 12356 (that superseded EO 12065) effective August 1, 1982. Interim guidelines issued by the NASA Security Office were handed out for information purposes only.

STAR and IAA Coverage — Charles W. Hargrave

Mr. Hargrave reported that NASA-generated preprints are being announced in both STAR and IAA. He noted that Dissertation Abstracts is being examined for standard input to STAR. The addition of GPO report numbers to NASA report citations in STAR was noted. No actions proposed.

On-Going Research — Charles W. Hargrave

Mr. Hargrave reviewed the discontinuation of the On-Going Research Projects section in STAR due to the transfer of SSIE functions to NTIS. He described problems on obtaining DoD on-going research information. Proposed action includes the processing of DoD on-going research information in NASA data bases for RECON retrieval.

High and Low Numbered TM's — Charles W. Hargrave

Mr. Hargrave noted that NASA TM publications had carried only high numbers for several years regardless of whether they were printed at Langley or produced in smaller quantities at the centers. Since a way is needed to easily identify the latter, which are available from STIF in microfiche form only, he said NASA should resume using low report numbers for printed TM's and high-numbers for center produced TM's. Pending serious objections, Mr. Wente said this change would be made.

Status of NIAC's — Van A. Wente

Mr. Wente reported that NASA Industrial Application Centers were under review by the Industry Affairs Division in Washington and that Len Ault had indicated that while one or two changes might be made, NIAC's were in general healthy and would continue in their present mode of operation.

Product Value Assessment — Van A. Wente

Mr. Wente reported that the product value assessment described at the 1981 annual conference was being expanded to include NASA contractors. A survey form had been approved by OMB and was out. A combined center-contractor analysis would be made, he said.

User Charges — Van A. Wente

Mr. Wente discussed new user-charges to be instituted for all organizations except NASA centers: $80 per search for requests to STIF. $20 (from $15) per hour for RECON access. He noted that universities were exempted from the $80 search charge, at least on a trial basis, and also that the DoE exchange arrangement granting no-charge DoE/RECON access to certain NASA centers was being corrected to a standard charge policy for all parties.

AGARD Presentation on NASA STI Program — Van A. Wente

Mr. Wente handed out advance copies of a paper presented jointly in September by Lou Lushina and Hu Sauter at an AGARD meeting in Rome. Formal distribution of the paper would come later in an AGARD Conference Proceeding. The paper contained a history of the NASA STI program and some up-to-date data on the system, together with a complete list of products and services.

SESSION 9: — Session Chairpersons

Conference Summary

Each Session Chairman reviewed the highlights of his own Session, Mr. Wente substituting for Mr. Talbert. Principal action to be taken were:

Mr. String:	Revise definitions for productivity reporting; Develop funding requirement for integrated library system
Mr. Rowsome:	Send out report production data
Mr. Hargrave:	Revise standard clause for contract reporting
Mr. Wente:	Revise method for announcing FEDD documents.

Mr. Wente summarized the meeting by contrasting the excellent weather with that of the floods of 1972 and characterizing the meeting as having a flexible and open format. A round of applause rang out for the very pleasant accomodations and outstanding arrangements made for the conference by Jess Ross and his staff. Mr. Wente said the next conference would very likely be in Washington again, although a center site might be considered. The 1983 conference will emphasize technical publication policies and practices.

CONFERENCE REGISTRATION

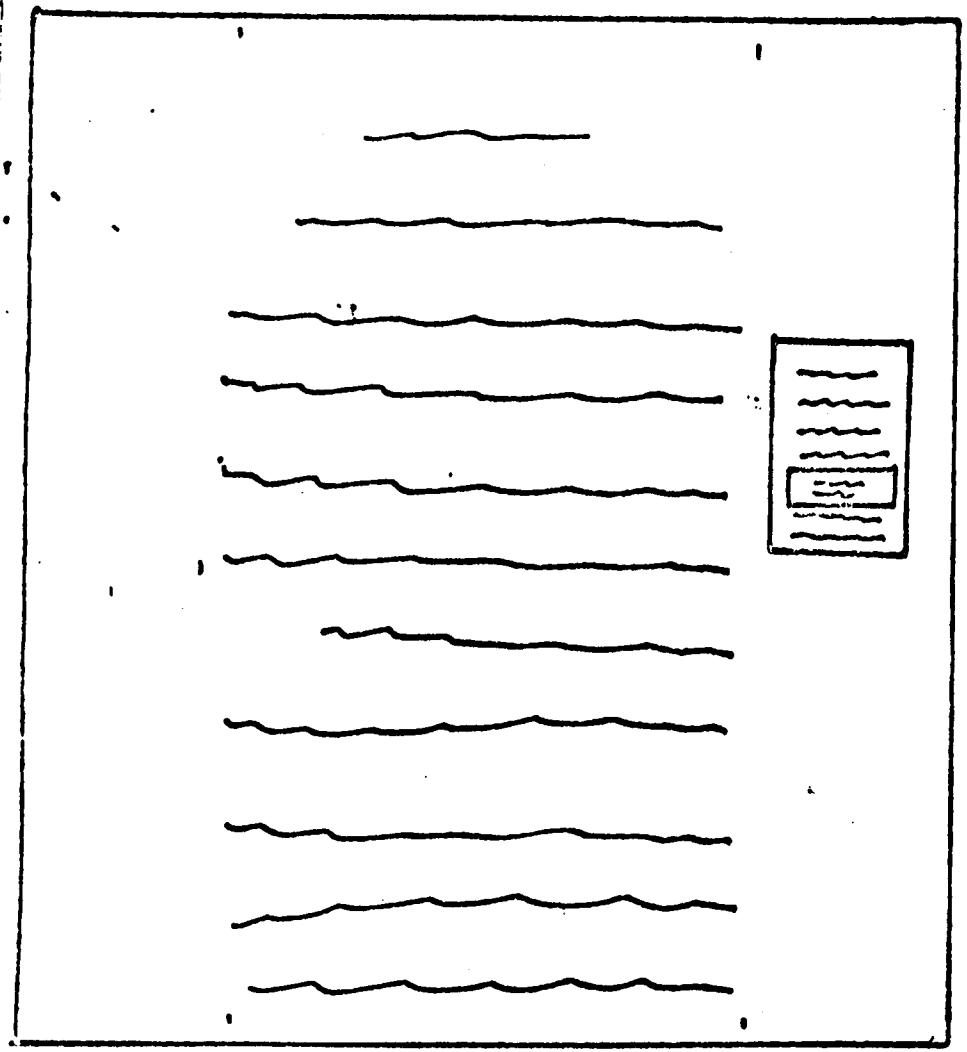
ATTENDEES

1.	ABRAM, Willie Mae	LaRC
2.	ANDERSON, Mary E.	HQ
3.	APPLEBY, Margaret G.	LeRC
4.	BATKINS, Nadine J.	LaRC
5.	BENNETT, Paul	LeRC
6.	BOGOLUBSKY, Irene	AIAA
7.	BRINKLEY, Thomas H.	LaRC
8.	BROWN, Harriette	KSC
9.	CRUMPLER, Doris	LaRC
10.	CURTIS, Willaree R.	LaRC
11.	DEL FRATE, Adelaide A.	GSFC
12.	DUEKER, Sarah	ARC
13.	FLOYD, Carolyn R.	LaRC
14.	GIGNAC, Joseph	STIF
15.	GOUGER, Garland H., Jr.	LaRC
16.	HELMETSIE, Carolyn	LaRC
17.	HESS, Jane S.	LaRC
18.	HEYSON, Marilyn B.	LaRC
19.	HUBBARD, Jean	GSFC
20.	HUFFMAN, Jeane	LaRC
21.	JEWELL, Don	STIF
22.	JOHNSON, Eloise	LaRC
23.	LEE, Kaye	LaRC
24.	MANDEL, George	LeRC
25.	MARSHALL, Patricia	AIAA
26.	MATTSON, A.	LaRC
27.	MEIGHAN, Mary	NSTL
28.	MELTON, Wayne S.	LaRC
29.	MILLER, Susan K.	LaRC
30.	MILES, Herman W.	STIF
31.	MORRIS, Dorothy A.	LeRC
32.	MORRIS, Mae	LaRC
33.	MOTLEY, Susan	LaRC
34.	PEACOCK, Richard W.	LaRC
35.	PHELPS, Robert L.	LaRC
36.	PINELLI, Thomas E.	LaRC
37.	QUINBY, Linda	DFRF
38.	ROSE, L. J.	LaRC
39.	ROSS, Jess G.	LaRC
40.	ROWSOME, Frank H.	HQ
41.	SAMOS, J.	LaRC
42.	SIMKINS, William	LaRC
43.	SMITH, Buford L.	HQ
44.	STRING, Alfred C., Jr.	HQ
45.	SWEET, Vicki	LaRC
46.	TALBERT, Rexford H.	HQ
47.	TRACY, Joyce	LaRC
48.	VOGEL, Eric	STIF
49.	VOGEL, Lawrence W.	HQ
50.	WAGNER, Susan	CLSI
51.	WALDEN, Rhonda E.	LaRC
52.	WATTERSON, Earl	STIF
53.	WENTE, Van A.	HQ
54.	WILDER, D. Adel	JPL
55.	WILSON, John H., Jr.	HQ
56.	ZOEFFEL, Joel K.	LaRC

ATTACHMENT 1

IITRI PROTOTYPE SYSTEM

PAGE FORMAT



COST CONSIDERATIONS

0 VIDEO DISK INITIAL REPLICATION COST IS THE SAME AS MICROFILM, ETC., FOR O(1200) COPIES (DOES NOT INCLUDE CONSIDERATION OF HIGHER MICROFILM COSTS ASSOCIATED WITH

- HANDLING
- STORAGE
- MAILING

} DUE TO LARGER PHYSICAL SIZE

- REQUIRED REPLICATION DUE TO LIMITED SHELF LIFE

0 COST OF PRODUCTION OF MASTER DISK ($\approx$1000 RPTS.) IS O($1300)

- FOR O(1000 COPIES) COST PER COPY IS O($5 -> FOR 1000 RPTS.)

ATTACHMENT 2 Oct. 19

POSSIBLE INCREASED RESEARCHER EFFECTIVENESS THROUGH MASS-STORE DEVICES UTILIZED AS LOCAL TECHNICAL INFORMATION SOURCES

OBSERVATION:

INDICATION OF A 1 TO 1 CORRESPONDENCE BETWEEN TECHNICAL LIBRARY USE AND RESEA
↗ researche
EFFECTIVENESS/EFFICIENCY

PROBLEMS WITH CURRENT LIBRARY SYSTEMS:

- ARE "OFF-SITE" IN RELATION TO THE RESEARCHERS OFFICE/LABORATORY
- CAN ONLY CONDUCT SUBJECT/ABSTRACT, ETC., SEARCHES
- USUAL LAG TIME FOR INFORMATION (TEXT) AVAILABILITY (DAYS TO MONTHS) IS STRO
↗ Strongly
  OUT OF PHASE WITH RESEARCHER THOUGHT PROCESSES (MINUTES TO HOURS)

POSSIBLE SOLUTION TO PROBLEMS WITH CURRENT LIBRARY SYSTEMS

- PROVIDE RESEARCHER WITH HIS PERSONAL, ON SITE FULL TEXT LIBRARY
  (THIS BRINGS THE TECHNICAL INFORMATION DIRECTLY TO THE RESEARCHER)
  RAPIDLY BECOMING POSSIBLE DUE TO THE FOLLOWING:
  - (1) EXISTENCE, IN MOST SCIENTIFIC OFFICES, OF COMPUTER TERMINAL CRT's WITH HARD COPY CAPABILITY
  - (2) DEVELOPMENT OF RELATIVELY INEXPENSIVE (COMMERCIAL) VIDEO DISC SCANNER/PLAYER WITH RANDOM ACCESS CAPABILITY
    - HUGE MASS STORE CAPABILITY (O(500 FULL TEXT TECHNICAL DOCUMENTS PER SIDE))
    - POSSIBLE LOW COST PER REPLICATED DISK (~$10)
    - SCANNER/PLAYER COULD BE CONNECTED TO (1) ABOVE FOR OPERATION/HARD COPY
    - DISKS COULD BE TARGETED FOR SPECIFIC TECHNICAL SUB-SPECIALTIES (NOT JUST COMPLETE ISSUES OF STAR)

- CONVERTS THE LIBRARY INTO A DISK-JOCKEY OPERATION
  - MAINTAIN HIGH QUALITY DOCUMENT/DISK SOURCE/RETRIVAL CAPABILITY
  - MAINTAIN HIGH QUALITY SUBJECT SEARCH CAPABILITY (ESPECIALLY FOR OTHER (NON-DISK) DATA BASES)

- LIMITED VERSION OF THIS (PUTTING RECON ONTO RESEARCHER OFFICE TERMINALS) HAS PROVEN HIGHLY SUCCESSFUL AT LaRC

PROTOTYPE LASER-DISC SYSTEM DEVELOPED AT IITRI FOR "STORAGE & RETRIVAL OF TEXTUAL INFORMATION"

- DEVELOPER - PETER SCHIPMA (INFORMATION SCI. DEPT.)
- FUNDING - NSF, U.S. ARMY
- GROUND RULE FOR SYSTEM DEVELOPMENT
  - LOW USER SITE COST (O($600))
    - EXISTING COMMERCIAL VIDEO DISK PLAYERS
    - STANDARD BLACK & WHITE T.V. RECEIVERS (OR STANDARD CRT TERMINALS)
- KEY CONCEPT FOR FEASIBILITY - UTILIZE A 6 TO 1 PACKING OF THE TEXT PAGES TO ATTAIN REQUIRED RESOLUTION WITH EXISTING COMMERCIAL (INEXPENSIVE) EQUIPMENT; (E.G., SCREEN DISPLAYS ≈ 1/6 OF A TEXT PAGE)

NASA SCIENTIFIC AND TECHNICAL INFORMATION BRANCH

PERIOD ENDING OCTOBER 1, 1982

INSTITUTIONAL RECON USERS

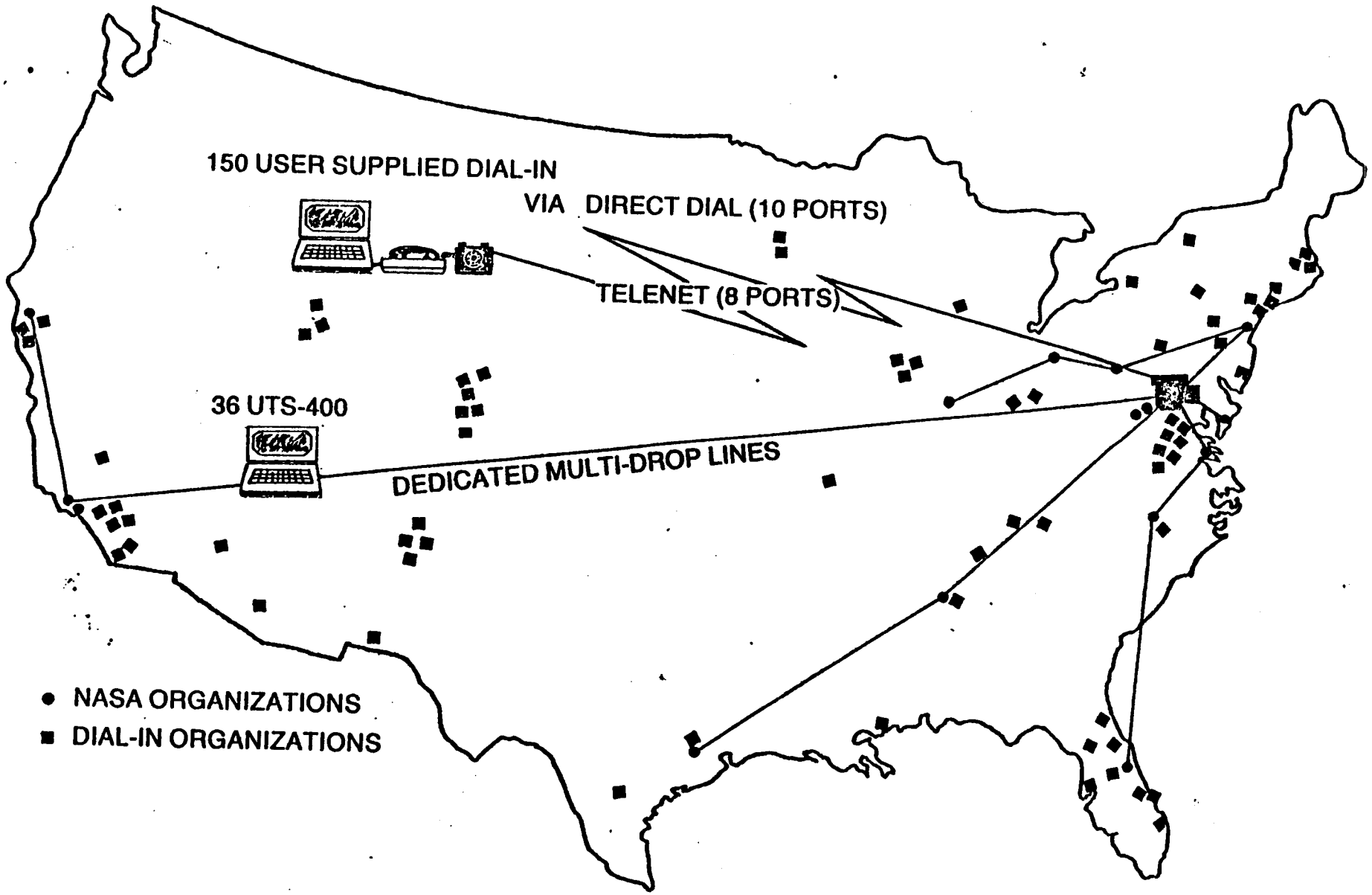
ORGANIZATION	HARD WIRE	DIAL UP	TOTAL
NASA (INCLUDING JPL, RSIC)	23	20	43
NASA FACILITY	7	20	27
IACs/STACs	4	15	19
AIAA	2	2	4
U. S. GOVERNMENT	0	8	8
DOE EXCHANGES (INCLUDING 2 U.S. GOVERNMENT)	0	9	9
TOTALS	36	74	110
PERCENT OF COMMANDS PROCESSED	79	12	91

REIMBURSABLE RECON USERS

ORGANIZATION	HARD WIRE	DIAL UP	TOTAL
U. S. GOVERNMENT	0	18	18
INDUSTRY	0	65	65
UNIVERSITIES	0	18	18
TOTALS	0	101	101
PERCENT OF COMMANDS PROCESSED		9	9
GRAND TOTALS	36	175	211

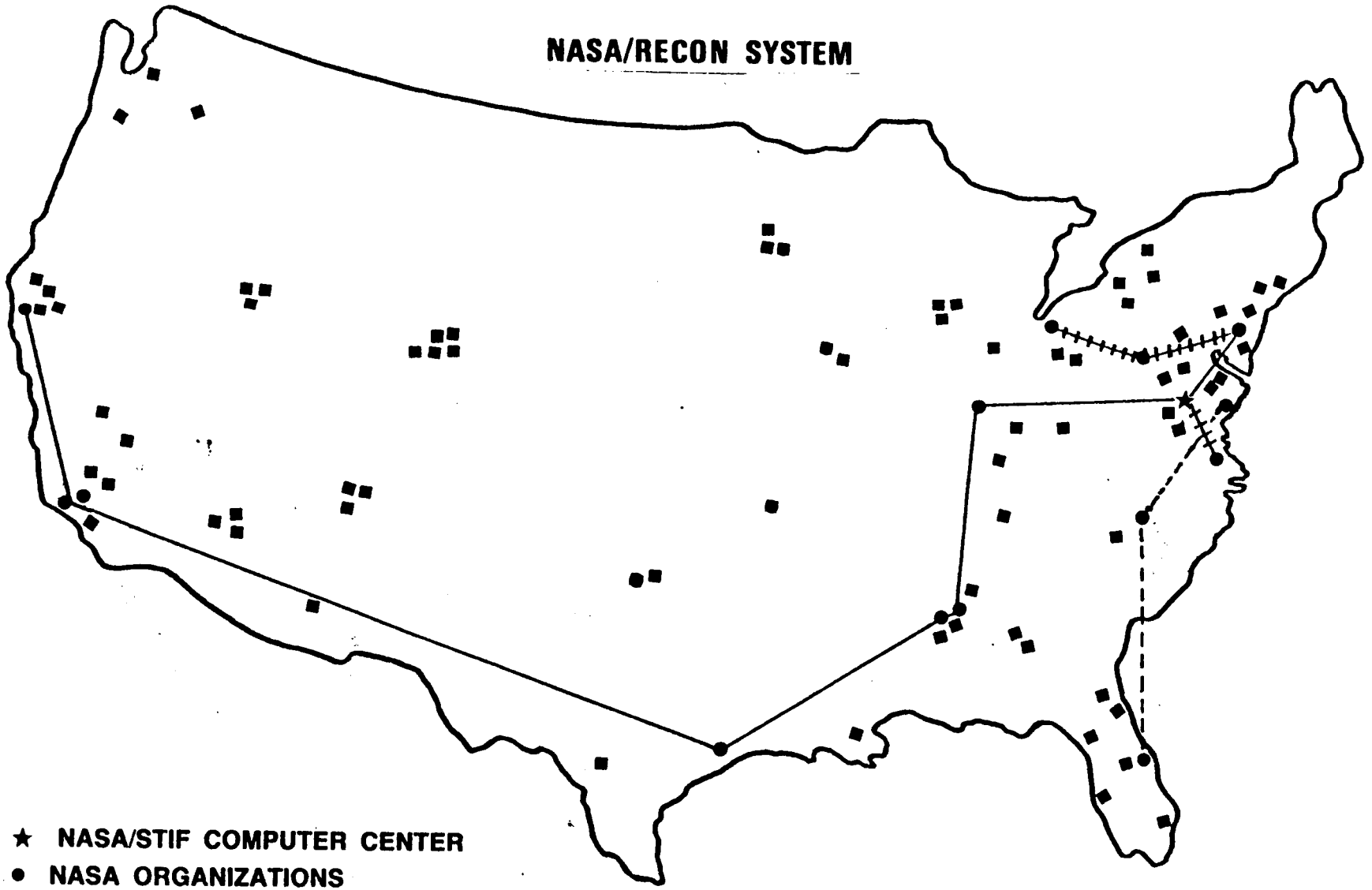
ATTACHMENT 3 Oct. 19

NASA/RECON SYSTEM



1 JUN 82

NASA/RECON SYSTEM



★ NASA/STIF COMPUTER CENTER

• NASA ORGANIZATIONS

——— DIGITAL CIRCUIT DSEM 58956

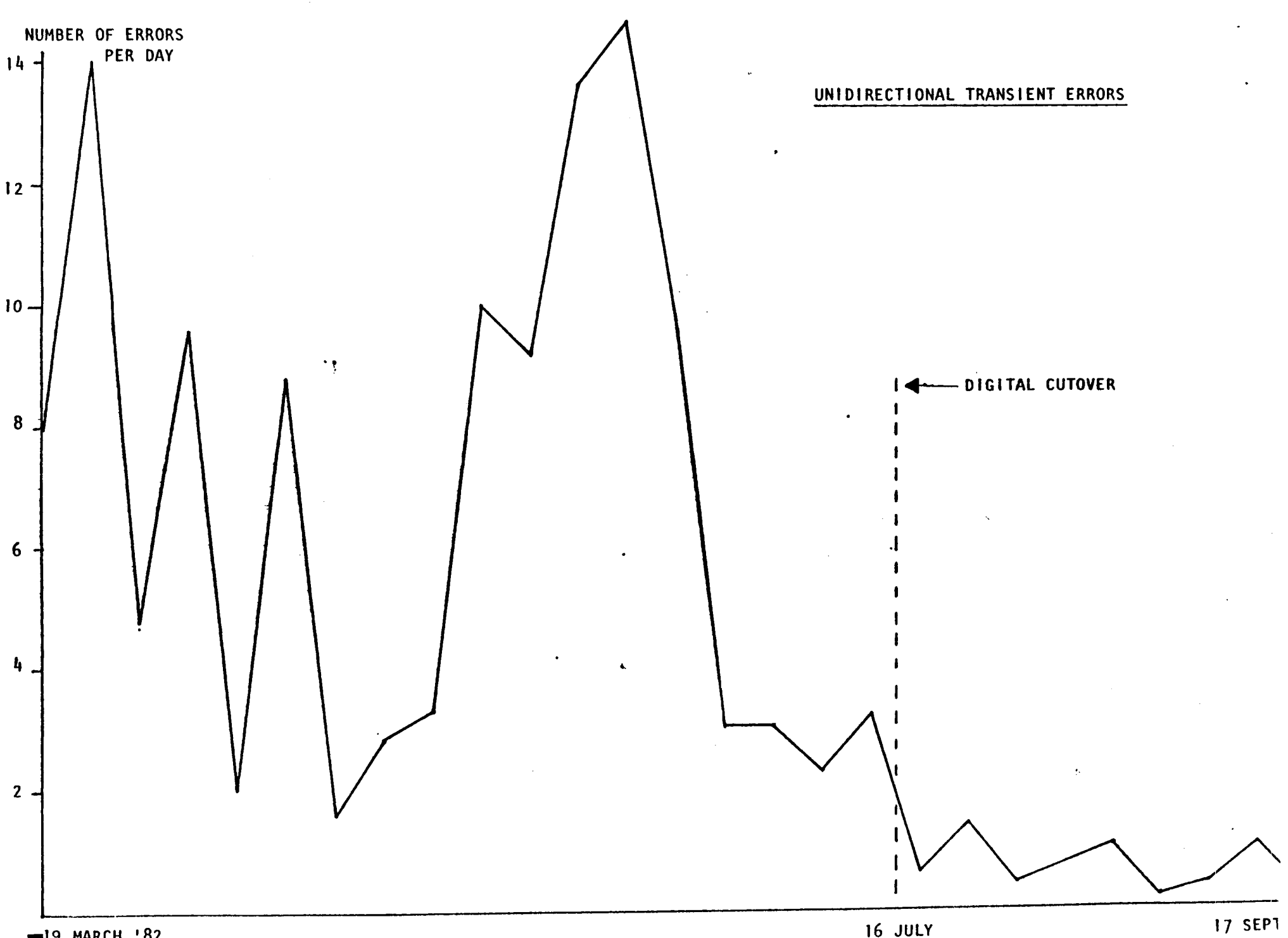
+++++++ DIGITAL CIRCUIT DSEM 58955

– – – – – – ANALOG CIRCUIT GD 59106

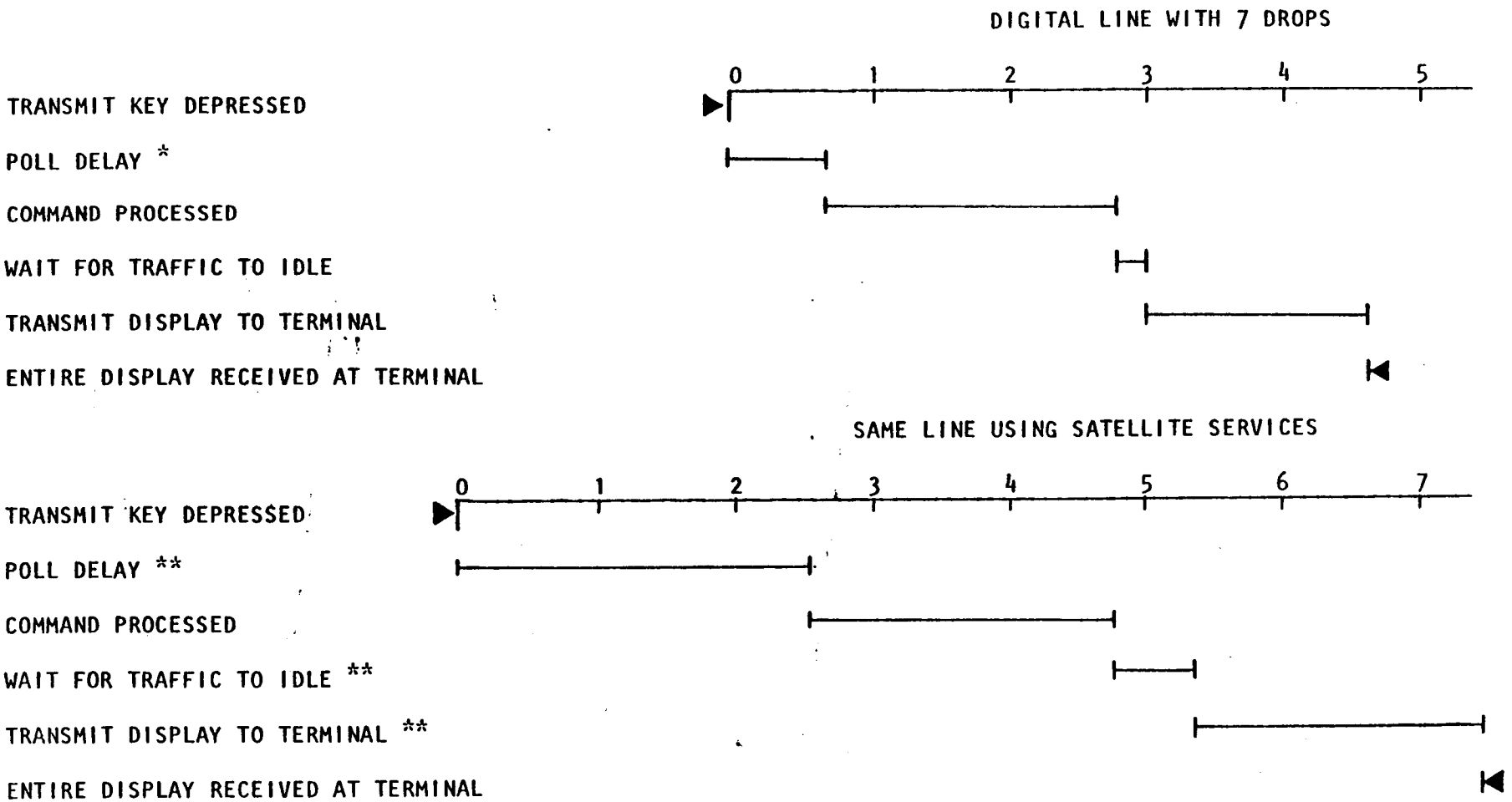
> 36 UTS-400 USERS ON DEDICATED MULTI-DROP LINES

■ DIAL-IN ORGANIZATIONS – 175 USER SUPPLIED DIAL-IN TERMINALS

1 OCT 82


NUMBER OF ERRORS PER DAY
14
12
10
8
6
4
2
UNIDIRECTIONAL TRANSIENT ERRORS
DIGITAL CUTOVER
19 MARCH '82
16 JULY
17 SEPT

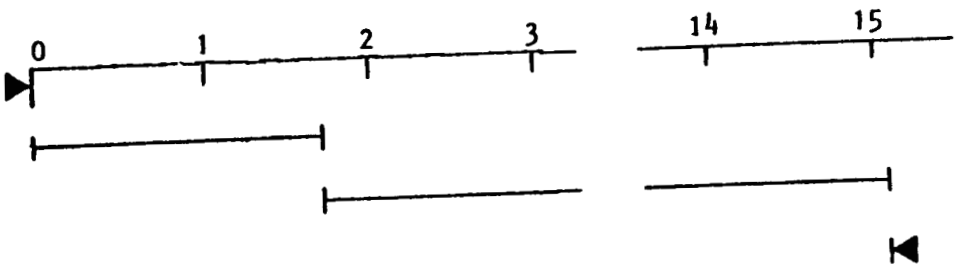
UTS-400
RESPONSE DELAY CHART
FOR 'DISPLAY' COMMAND



* POLL DELAY INCREASES 25% OR 150 ms FOR ANALOG LINE
** THIS TIME INTERVAL HAS INCREASED DUE TO SATELLITE PROPAGATION DELAY

RESPONSE DELAY CHART
FOR 1200 BAUD TTY TERMINALS

23 LINE 'DISPLAY' COMMAND RESPONSE



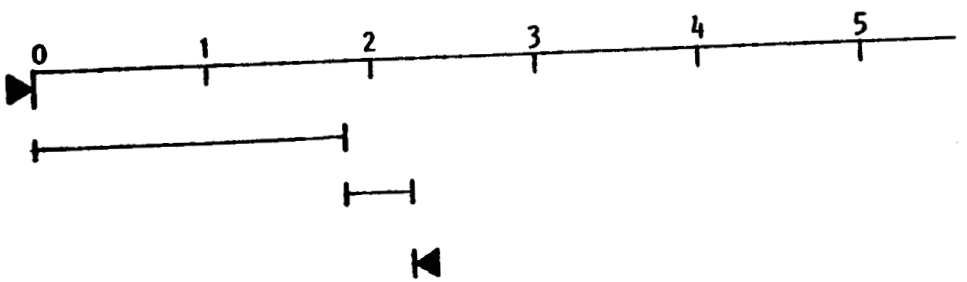
CARRIAGE RETURN

COMMAND PROCESSED

TRANSMISSION TO TERMINAL BEGINS

ENTIRE DISPLAY RECEIVED AT TERMINAL

SIMPLE 'SELECT' COMMAND RESPONSE



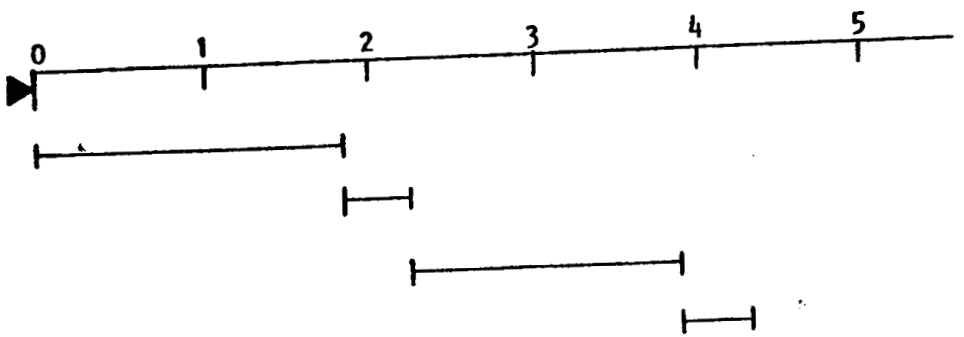
CARRIAGE RETURN

COMMAND PROCESSED

TRANSMISSION TO TERMINAL BEGINS

ENTIRE RESPONSE RECEIVED AT TERMINAL

SAME 'SELECT' COMMAND RESPONSE USING TELENET



CARRIAGE RETURN

COMMAND PROCESSED

RESPONSE TRANSMITTED TO TELENET

TELENET NETWORK DELAY *

TELENET TRANSMITS RESPONSE TO TERMINAL

ENTIRE RESPONSE RECEIVED AT TERMINAL

* TELENET DELAY WILL GENERALLY VARY FROM 1 TO 4 SECONDS DEPENDING ON THE NETWORK ACTIVITY

NASA RECON

ENHANCEMENTS & HARDWARE

ATTACHMENT 4 Oct. 19

I. PAST YEAR (FY 82) COMPLETED PROJECTS

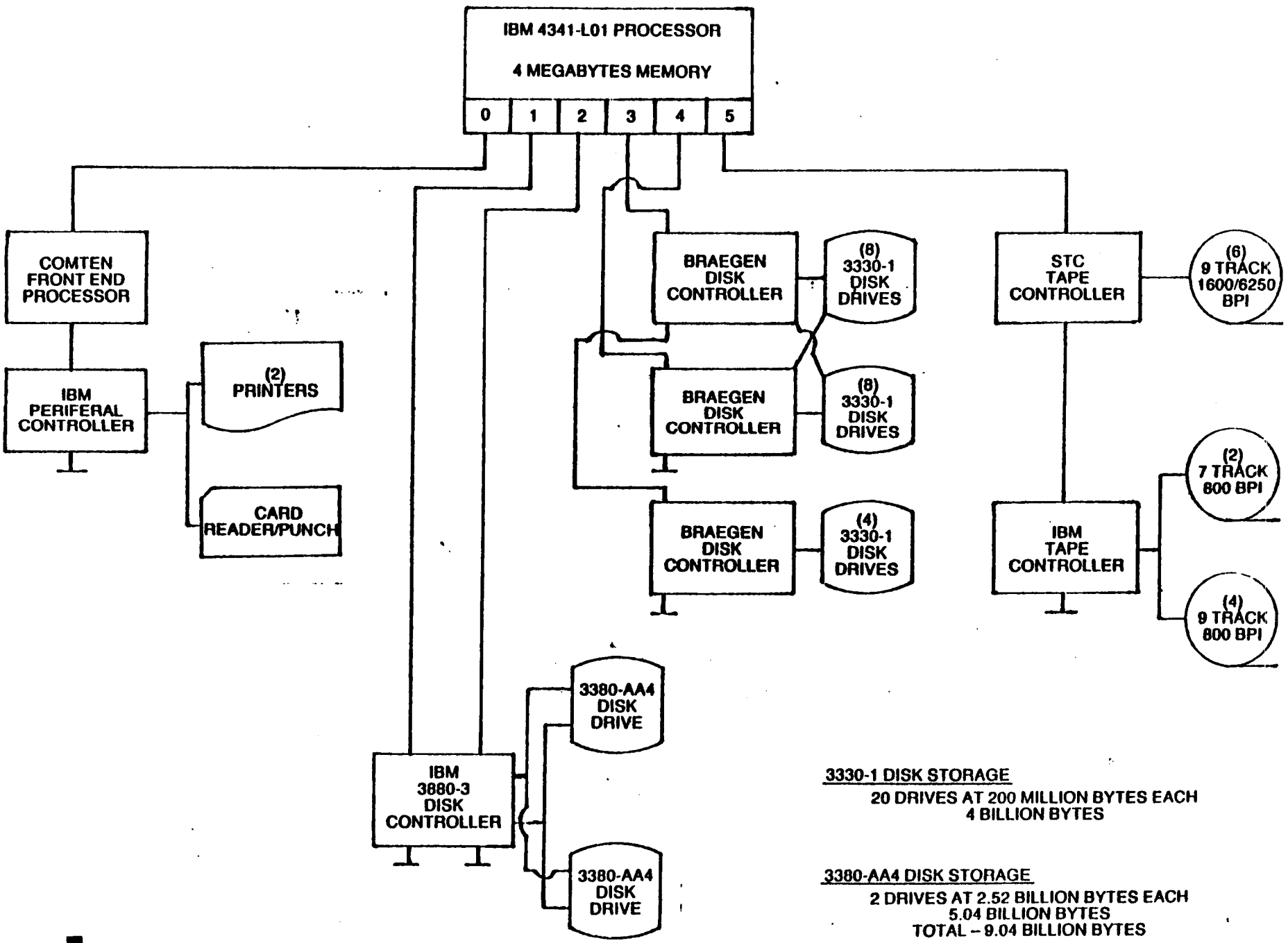
A. PROJECTS APPARENT TO THE USER

- BATCH STORED SEARCH
- NEW HELP INFORMATION - SEARCHABLE MNEMONICS
- INDEXES FOR SPECIAL BIBLIOGRAPHIES
- 1200 BAUD DIAL-UP CAPABILITY
- FULL PAGE DISPLAY FOR DIAL-IN TERMINALS
- UTS 400 FEATURES (RECALL, REPEAT, TAB, QUERY ABBREV)
- NUMEROUS COSMETIC AND CORRECTIVE MODIFICATIONS TO RECON COMMANDS
- IMPROVED RELIABILITY AND RESPONSE TIME

I. PAST YEAR (FY82) COMPLETED PROJECTS

B. PROJECTS NOT SO APPARENT TO THE USER

- CONVERSION TO NEW HOST COMPUTER/OPERATING SYSTEM
- CONVERSION TO NEW COMMUNICATIONS PROCESSOR/COMM SOFTWARE
- CONVERSION TO NEW DISK TECHNOLOGY
- CONVERSION TO DIGITAL LINES



3330-1 DISK STORAGE

20 DRIVES AT 200 MILLION BYTES EACH
4 BILLION BYTES

3380-AA4 DISK STORAGE

2 DRIVES AT 2.52 BILLION BYTES EACH
5.04 BILLION BYTES
TOTAL – 9.04 BILLION BYTES

II. PRESENT YEAR (FY 83) SCHEDULED RECON PROJECTS

A. PROJECTS APPARENT TO THE USER

- UTS 400 FEATURES
  - STACK COMMMAND
  - STORE COMMAND HISTORY
  - EDITING QUERY ALTER & CREATE
  - SELECT FORMAT FOUR

- DOCUMENT ORDERING FEATURES
- RECON HOST PROCESSOR UPGRADE

II. PRESENT YEAR (FY83) SCHEDULED RECON PROJECTS

B. PROJECTS NOT SO APPARENT TO THE USER

- IMPROVED RECON STATISTICS
- CONVERSION TO NEW PBX
- EXPANSION OF USER COMMUNITY
- NEW INPUT PROCESSING SYSTEM

III. PRESENT YEAR UNSCHEDULED EVENTS AND SUCCEEDING YEAR (FY 84 ±) CANDIDATES

- SAVE SEARCH AFTER EXECUTION
- ARCHIEVAL/RETRIEVAL OF LOW USE STORED SEARCHES
- PHOTOCOMPOSITION OR IMPROVED PRINT QUALITY OF RECON OUTPUT
- INITIAL EVALUATION OF UTS 400 REPLACEMENT
- CONTINUING UPGRADE/AUGMENT EXISTING STIF EQUIPMENT
- RECON ACCESS TO ADDITIONAL FILE COLLECTIONS
- RECON ACCESS TO EXTERNAL DATA BASES
- FULL TEXT STORAGE & RETRIEVAL OF DATA

"TIS" MAJOR CAPABILITIES

1. Database Management
2. Interactive Modeling
3. Electronic Communication
4. Distributed Networking
5. Post Processing

ATTACHMENT 5 Oct. 20

INTELLIGENT GATEWAY COMPUTERS

Provide:
- Online directory to information
- Automated access
- Translation of formats & protocols
- Postprocessing of data
- Presentation graphics
- Transaction statistics

Hardware: — DEC PDP-11/70, VAX-750/780 & IDM-500

Software: — UNIX & META-MACHINE — Self-guiding user interface

Prototypes:			
	— LLNL	TIS	1976-present
	— DOE/TIC	IGC	1982

"TIS" OPERATIONAL RESOURCES:

Data bases:	64	Technical and economic datafiles
Models:	14	Electric-vehicle models
	1	STES Model
Communications:	64	Communication ports
		300-baud telephone lines (Comm & FTS)
		1200-baud telephone lines (Comm & FTS)
		300/1200-baud WATS lines
		ARPANET
		Telephone dial-out
		Dedicated lines, on site at LLL
		VOTRAX Voice synthesizer
		TYMNET/TELNET
Other computers:	22	Automated links to other computers/centers: DOE/RECON, NASA/RECON, DOE alternative fuels (OK), SERI, DOT/TSC, LBL-SEEDIS, MIT-MACSYMA, Worldnews (NYT, UP), etc.

1 NEWS

Technical information

2 MATERIAL PROPERTIES
3 ENERGY STORAGE COMPONENTS
4 ENERGY STORAGE SYSTEMS
5 INTERACTIVE VEHICLE MODELS
6 ECONOMIC ANALYSES OF ENERGY STORAGE TECHNOLOGY
7 TRANSPORTATION STATISTICS
8 TRANSPORTATION SYSTEMS RESEARCH

Economic information

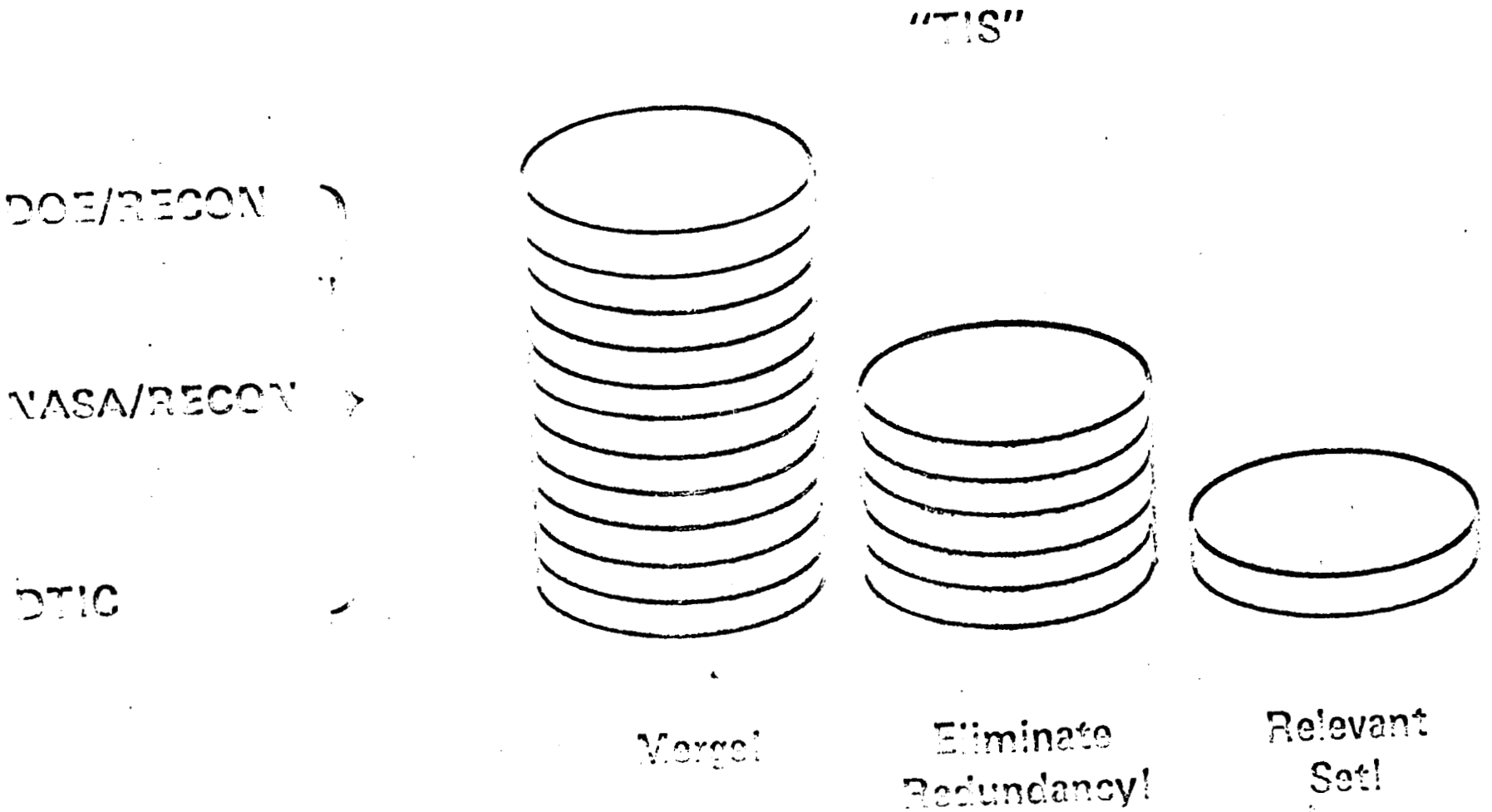
9 NATIONAL AND WORLDWIDE ENERGY DATA
10 NATIONAL ECONOMIC DATA

11 BIBLIOGRAPHIES
12 DOE/STOR ADMINISTRATIVE INFORMATION
13 INTEGRATED COMPUTER RESOURCES

On-line documentation

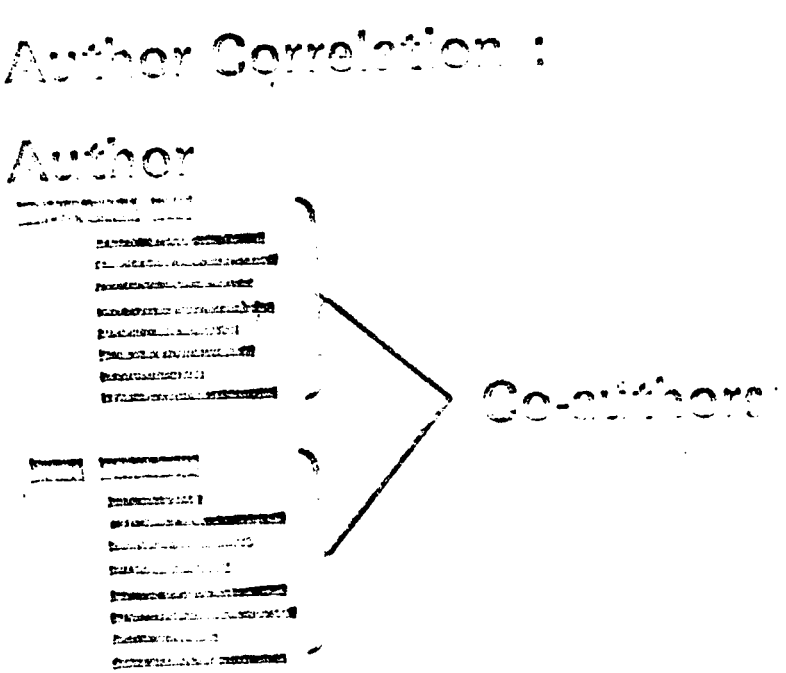
14 UTILITY COMMANDS
15 MAIL
16 HELP

COMPILATION FROM DIFFERENT SOURCES:

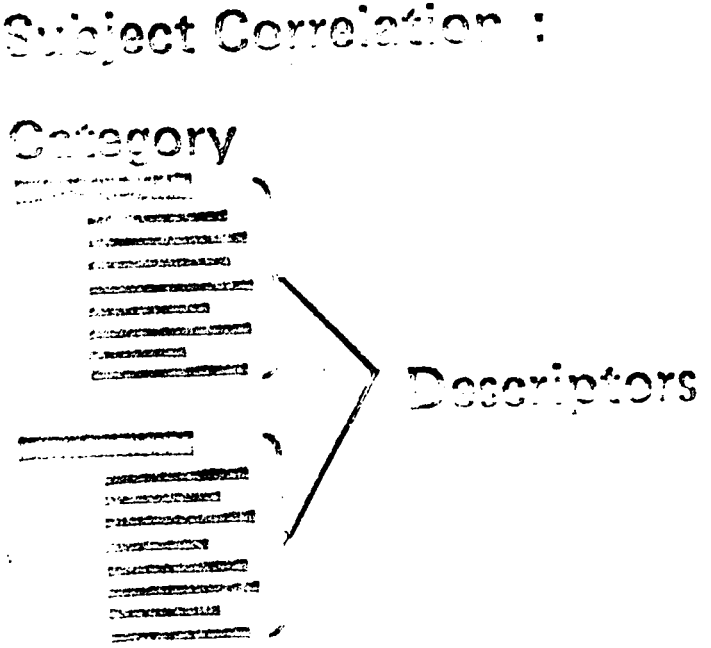


RECON ON-LINE BIBLIOGRAPHIC INDEXES

Author Correlation :



Subject Correlation :



* reconcross category descriptor file

* reconcross author author file

RECON ON-LINE BIBLIOGRAPHIC CONCORDANCES

Author

Year	Authors	Title	ID-Numbers
1			7812345
			123-ABC

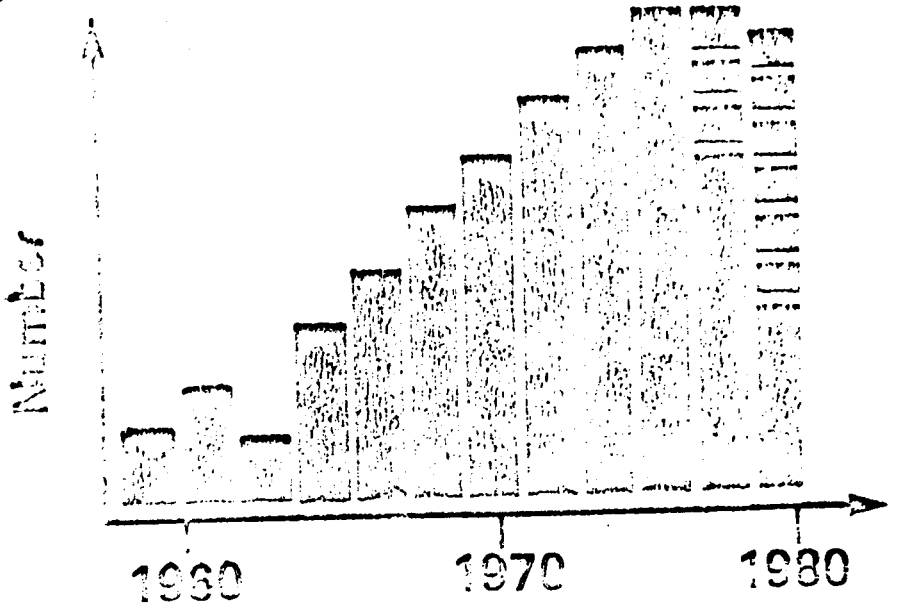
reconcord author

examples

by Country:

United States :	n1	55%
West Germany:	n2	15
France :	n3	13
Russia :	n4	12
Japan :	n5	5
Total	N	100%

by Publication:



OBJECTIVES OF FIELD TASK PROPOSAL OF "DOE/TIC INFORMATION EXCHANGE PROGRAM"

1. ONLINE DIRECTORY AND AUTOMATED ACCESS PROCEDURES

1.1 Online Directory

Energy Centers (DOE/TIC)
World Data Centers (CODATA/UNESCO)
Online Database Index (Cuadra Associates?)
Directory to Computer-Readable Databases (ASIS/U.Illinois)

1.2 Automated Access Procedures

DOE/RECON	*CIS*	*DARC*
NASA/RECON	*TIS*	*DECHEMA*
DOD/TIC - Uncl.	*BLS*	*ESO*
DIALOG	*NOAA*	*DIANE*
SDC	*USGS*	*Euronet*
DRS		

2. COMMON COMMAND LANGUAGE & PRE/POST-PROCESSING OF BIBLIOGRAPHIC INFORMATION

1.1 Common Command Language

DOE/RECON
NASA/RECON
DIALOG
INFORMATICS

1.2 PRE/POST-PROCESSING LIBRARY

Standard Citation Elements
Database Cross Correlation
Data Input Routines
Format Validation
Spelling Check

Machine-aided Indexing
ANSI/ISO Exchange Standard
Extraction & Saving
Elimination of Redundancy
Post-processing: correlation
concording
graphing
reporting

Translation to Word-Processors
Typesetters

OBJECTIVES OF FIELD TASK PROPOSAL OF "DOE/TIC INFORMATION EXCHANGE PROGRAM" (cont.)

3. DEVELOPMENT AND TESTING OF "INTELLIGENT GATEWAY COMPUTERS" (IGC)
   - 3.1 Testing of Operational "TIC" META-MACHINE
   - 3.2 Completion of 2nd Generation META-MACHINE
   - 3.3 Specification of IGC at DOE/TIC, Oak Ridge
   - 3.4 Installation of META-MACHINE on IGC, Oak Ridge
   - 3.5 Testing of IGC by "ICN" Agencies
   - 3.6 Interconnection of IGC with DOE Satellite Networks
   - 3.7 Transfer of IGC Technology to Other Agencies

4. LIBRARY OF MANAGEMENT TOOLS FOR NUMERIC DATA
   - 4.1 Online Data Definition Schema of Major DBMS at Agencies
   - 4.2 Implementation of ANSI/ISO Data Exchange Standard
   - 4.3 Library of Data Analysis Routines
   - 4.4 Library of Graphical Display Routines

5. SUPPORT OF ELECTRONIC MAIL, and VIDEO-TEXT
   - 5.1 Electronic Mail
   - 5.2 Personalized Aids *(Address/Telephone Book, Calendar/Appointment File, etc.)*
   - 5.3 Voice Message Store & Forward
   - 5.4 Integration with Word Processors
   - 5.5 Integration with Typesetters
   - 5.6 Integration with Video Scanners

CENTERS

OF

EXCELLENCE

COOPERATIVE

COLLECTION

DEVELOPMENT

RETENTION/SPACE

ACQUISITION/BUDGET

ATTACHMENT 6 Oct 20

OUTPUT PER STAFF YEAR

LIBRARY TRANSACTIONS	EDITING	DOCUMENTATION
73,698*	132,200	21,000
44,523	16,877*	9,440
37,132	12,980	2,475*
21,892*	4,192	2,192
9,551*	2,752*	2,189
9,252	2,292	2,064
7,426	1,620	1,786
4,120	1,351	1,482*
3,852	622*	296*

*CONTRACTOR

VU-GRAPH 1

Lewis Research Center
October 1982

MANAGEMENT SERVICES DIVISION

GUERIN HOUSE WORKSHOP SESSIONS

- GRAPHICS PROBLEM AREAS
  - BROCHURES AND NONTECHNICAL PUBLICATIONS
- WORD PROCESSING AND PHOTOTYPESETTING TECHNIQUES
  - POTENTIAL USES IN DIVISION
- TECHNICAL PUBLICATIONS
  - PROFESSIONAL JOURNAL FORMAT, COVER DESIGN, INTERSPERSED FIGURES, ETC.
- LEWIS HOSTED CONFERENCES
  - LOGISTICS, PREPRINTS, EXHIBITS, AGENDAS, ETC.
- COMPUTERIZED DATA TERMINALS
  - TRAVEL, MANUSCRIPT TYPING, LIBRARY, COMPUTER GRAPHICS, ELECTRONIC MAIL

ATTACHMENT 7 Oct 20

VU-GRAPH 2

LEWIS RESEARCH CENTER
OCTOBER 1982

MANAGEMENT SERVICES DIVISION

DIVISION STAFF MEETINGS/CONTINUING EDUCATION WORKSHOPS

SPEAKERS - ORGANIZATION	DIVISION STAFF MEETING SUBJECT	DIVISION ATTENDEES	WORKSHOP TOPICS	WORKSHOP ATTENDEES	DATES
1. PHIL ECKERT, NASA SCI.-TECH. INFO. FACILITY, BALTIMORE	NASA SCI.-TECH. INFO. FACILITY SERVICES	30-35	LIBRARY STAFF MEMBERS: ADVANCED RECON SEARCHING STRATEGY	9	SEPT. 19-20, '79
2. DON LICHTY, CHIEF, ADM. SERVICES BR., NASA HQ.	ADM. SERVICES, WORD PROCESSING, ELECTRONIC MAIL, COMMUNICATION SYSTEMS	30-35	ADM. SERVICES BRANCH: MAIL ROOM TECHNIQUES; GOV'T PRINTING OFFICE INTERFACE; MGT. ISSUANCES, FORMS MGT.	12	NOV. 27-28, '79
3. BOB SCHULMAN, GRAPHICS COORDINATOR, NASA HQ.	NASA GRAPHICS ART PROGRAM; GRAPHIC STANDARDS	30-35	GRAPHICS BRANCH: EDITORIAL BR.: LAYOUT AND COMPOSITION OF BROCHURES; NASA CORPORATE IMAGE	10 7	AUG. 28, 1980
4. PROF. JOHN COMPTON, ROCHESTER INST. OF TECHNOLOGY	PHOTOGRAPHIC & PRINTING TECHNIQUES; TRENDS AND TECHNOLOGY	30-35	PHOTOGRAPHIC BR.: PRINT SHOP: QUALITY CONTROL; STANDARDS; IMPACT OF ADVANCED TECHNOLOGY	16 6	SEPT. 24, 1980

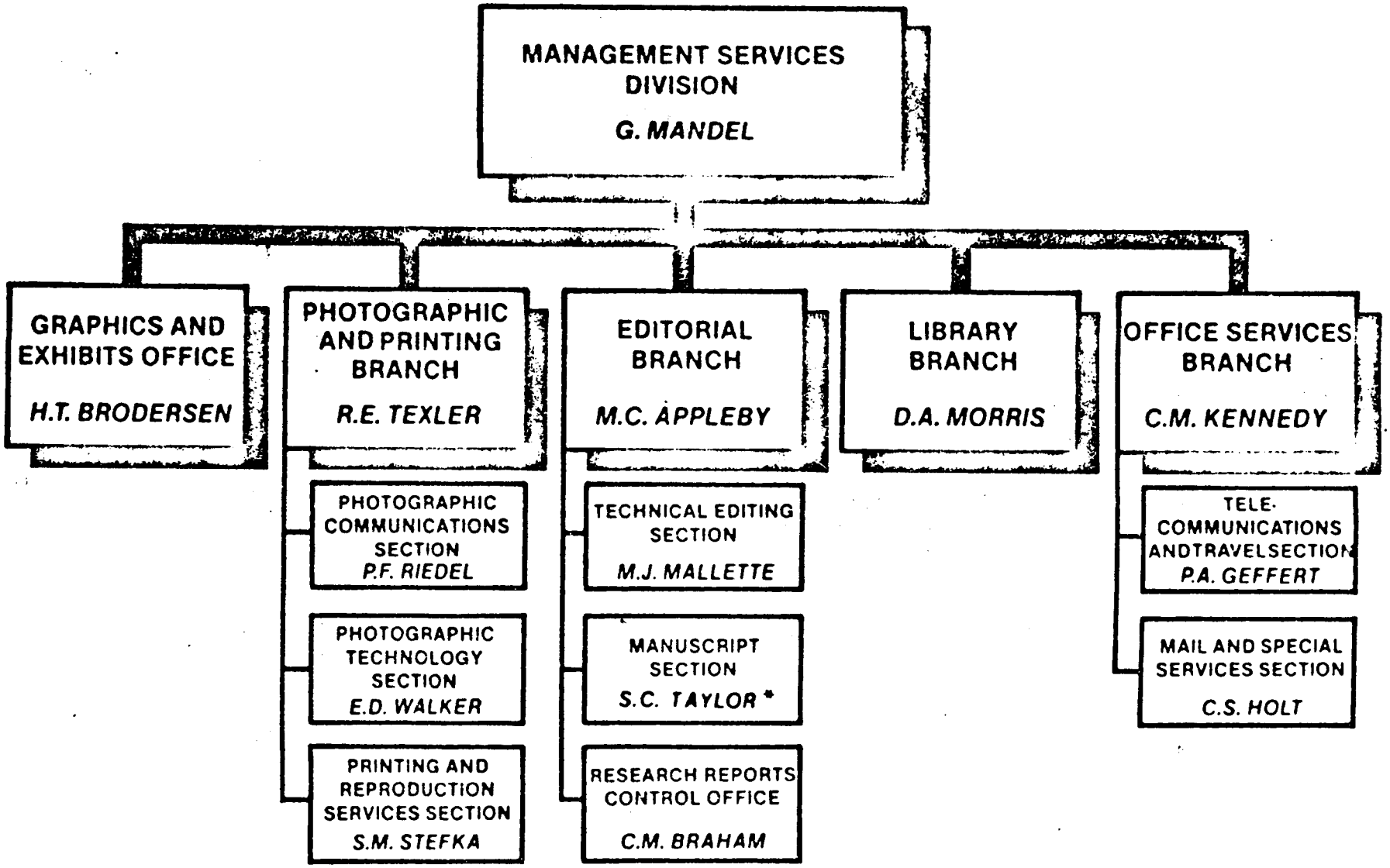
ATTACHMENT 8 Oct 20

SPEAKERS - ORGANIZATION	DIVISION STAFF MEETING SUBJECT	DIVISION ATTENDEES	WORKSHOP TOPICS	WORKSHOP ATTENDEES	DATES
5. JO ROBINSON, LAWRENCE RADIATION LAB., BERKELEY, CALIFORNIA	DOE-RECON TRAINING SESSION	5	ON-LINE PRACTICE DOE'S ENERGY INFORMATION DATA BASES		NOV. 16-20, '81
6. PROF. ROBERT RATENO, TRI-C, AND CLAY HERRICK, AD AGENCY OFFICIAL & TRI-C LECTURER	LAYOUT & DESIGN OF BROCHURES & REPORTS	38	ELEMENTS OF GOOD DESIGN & SCALING, PASTEUP TECHNIQUES, TYPES OF LAYOUTS, USE OF TYPESTYLES, ETC.	30	APRIL 2, 1981
7. B. ULLMAN, UNITED AIRLINES	DATA BANK TRAVEL TRENDS AND SERVICES, EFFECTS OF DEREGULATION, PATCO EFFECTS	15		4	MAY 26, 1982
8. J. MODARELLI, CONSULTANT	PUBLICATIONS DESIGN AND LAYOUT	40	TECHNICAL REPORT LAYOUT OF GRAPHICS	25	MAY 12, 1982
9. I. CATANIA, SYSTEM DEVELOPMENT CORP. (SDC) MCLEAN, VA	UPDATE ON RETRIEVAL OF DATA BANK INFORMATION ORBIT SEARCH STRATEGIES	11		11	MAY 18-19, '82
10. DAVID BRUNELL, FEDLINK, LIBRARY OF CONGRESS, DC	OCLC TRAINING SESSION; ON-LINE CATALOGING AND INTERLIBRARY LOAN	13	HANDS ON PRACTICE SESSIONS	13	NOV. 16-18, '82

Lewis Research Center

NASA

MANAGEMENT SERVICES ORGANIZATION



△ C-82-328
1900 6-82

* Acting

ATTACHMENT 9 Oct 20

VU-GRAPH 2

OCTOBER 1982

NASA LIBRARIES

	HQ	AMES	GODDARD	JOHNSON	KENNEDY	LANGLEY	LEWIS
CONTRACTOR TOTAL	4.5	10	19	1	16	11	--
PROFESSIONAL	3.5	4	2	1	8	2	--
TECHNICIAN/ CLERICAL	1	6	17	-	8	9	--
CIVIL SERVICE TOTAL	3	11	5	7	1	16	15.5
PROFESSIONAL	2	6	5	3	1	14	5
TECHNICIAN/ CLERICAL	1	5	--	4	-	2	10.5
TOTAL	7.5	21	24	8	17	27	15.5

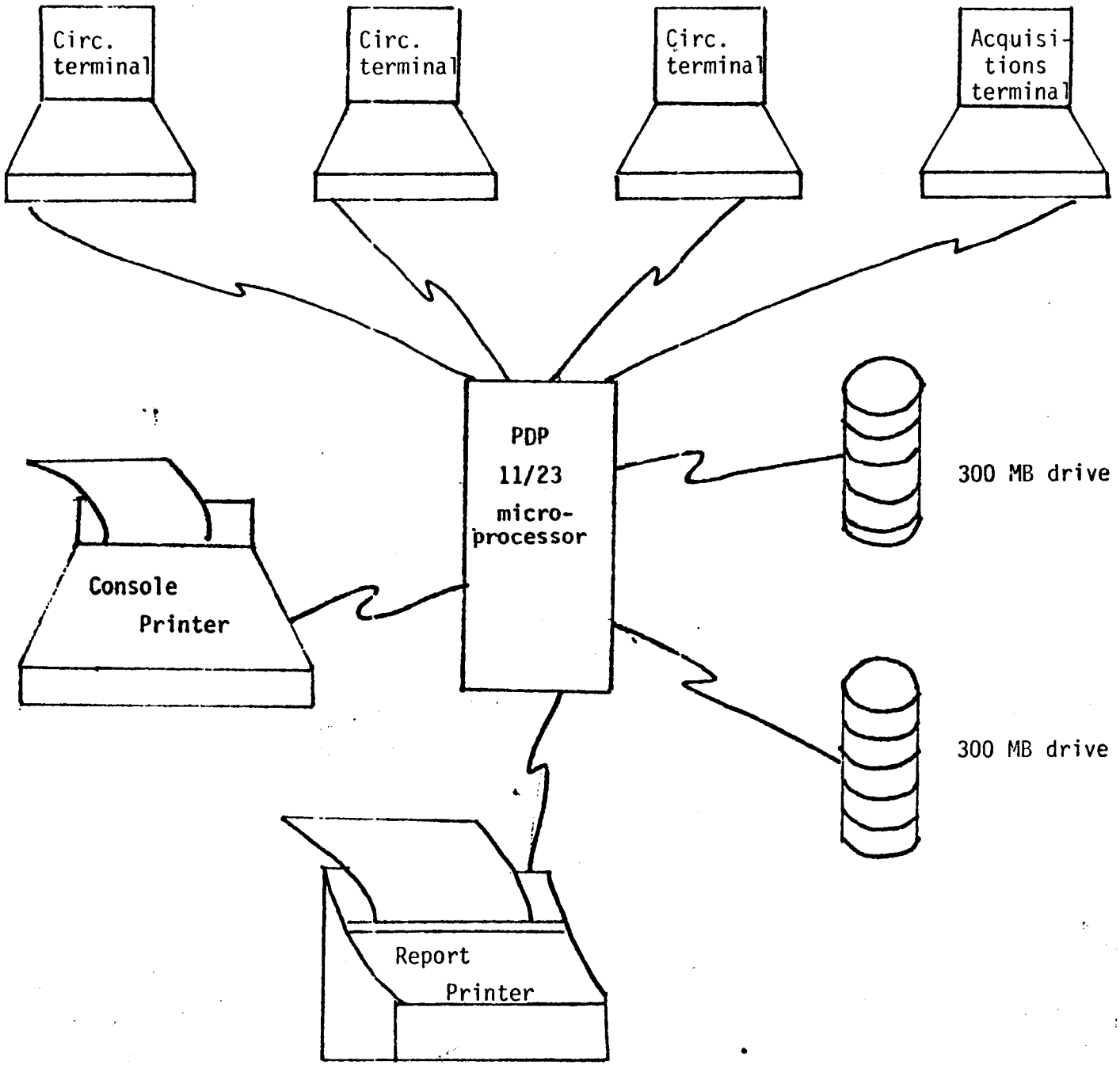
ATTACHMENT 10 Oct 20

PRESENTATION

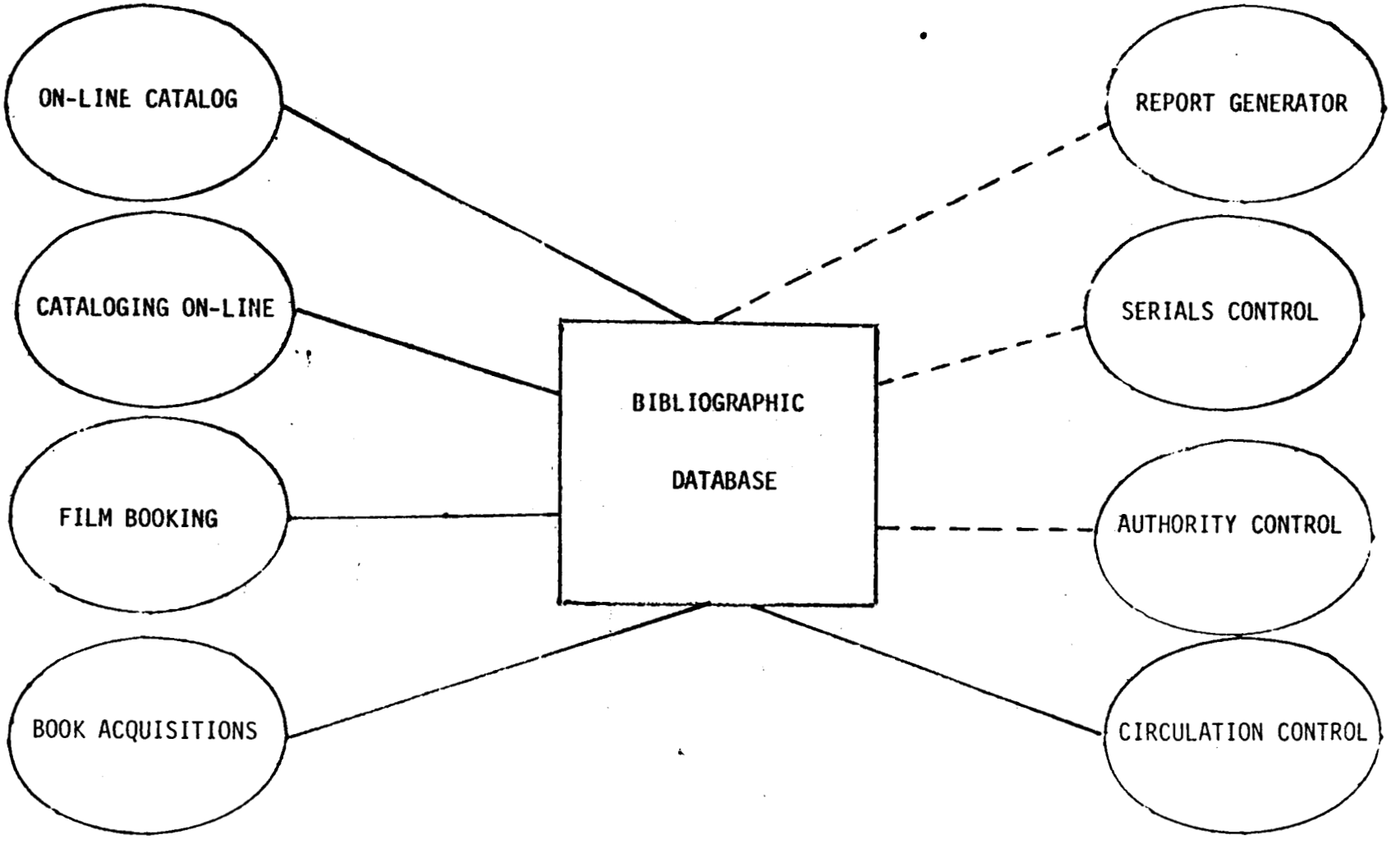
- INTEGRATED CLSI LIBS-100 SYSTEM 23
- CAPABILITIES OF SYSTEM
- INTERFACE WITH RECON
- SUGGESTED FIELDS FOR DATABASE

ATTACHMENT 11 Oct 20

INTEGRATED LIBS-100 SYSTEM 23



CAPABILITIES OF SYSTEM

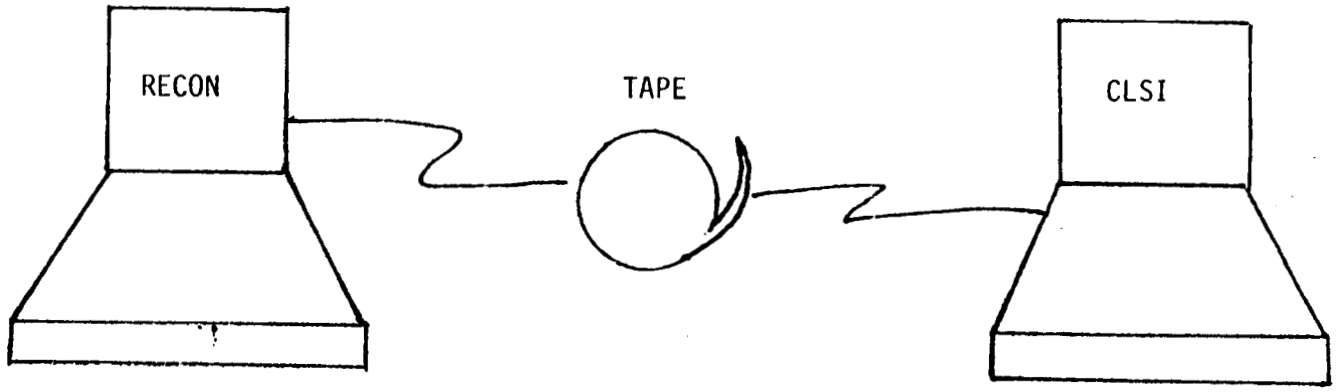


———— Presently Available

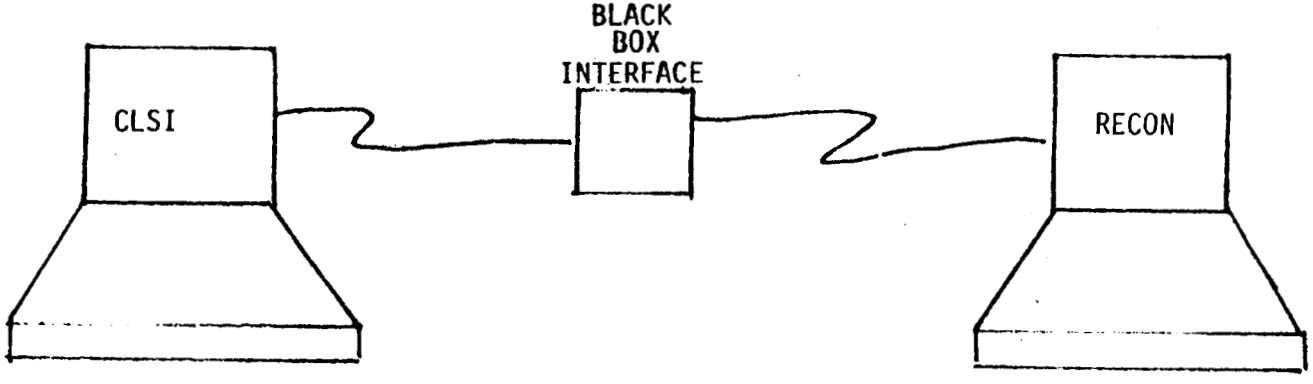
--------- Under Development

INTERFACE WITH RECON

STEP 1 : RETROSPECTIVE CONVERSION OF DATA



STEP 2 : DAY-TO-DAY OPERATIONS



SUGGESTED FIELDS FOR DATABASE

CURRENT FIXED FIELDS

1 CALL NUMBER/FILE NUMBER
2 MAINENTRY/AUTHOR
3 TITLE
4 EDITION
5 SERIES
6 DOCUMENT SOURCE
7 NOTES
8 LC CARD NUMBER
9 ISBN/ISSN

PROPOSED NEW FIELDS

10 CLASSIFICATION
11 LIMITATION
12 IMPRINT
13 COLLATION
14 ADDITIONAL TITLE 1
15 ADDITIONAL TITLE 2
16 ADDITIONAL AUTHOR 1
17 ADDITIONAL AUTHOR 2
18 ADDITIONAL AUTHOR 3
19 ADDITIONAL AUTHOR 4
20 SUBJECT 1
21 SUBJECT 2
22 SUBJECT 3
23 SUBJECT 4
24 SUBJECT 5
25 ALTERNATE REPORT NUMBER 1
26 ALTERNATE REPORT NUMBER 2
27 UNNAMED 1
28 UNNAMED 2
29 UNNAMED 3
30 UNNAMED 4

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ATTACHMENT 16 Oct 20